

FIRE ALARM SYSTEM

CALIFORNIA SQUARE APARTMENTS

LOUISVILLE, KENTUCKY

SHEETS

COVER PAGE C

FIRE ALARM SYSTEM F1-F2

FIRE ALARM SYSTEM DETAILS D1



4850 CRITTENDEN DRIVE
LOUISVILLE, KY 40209
Phone (502) 363-8633

Professional Sound Systems
Educational Systems
Healthcare Systems
Surveillance & Security Systems
Fire Alarm Systems



CALIFORNIA SQUARE
APARTMENTS
LOUISVILLE, KY

DISC:
COVER PAGE
JOB:
JOB NUMBER
DRAWN
JLB
APPROVED BY
DS
SCALE
NTS
LAST DATE REVISED
04-25-2012
REF:
N/A
SHEET
C

FIRE ALARM LEGEND

[FACP]	FIRE ALARM CONTROL PANEL (EST EST3 SERIES. SEE SUBMITTAL BOOK)
[BPS10]	BOOSTER POWER SUPPLY (EST BPS-10A)
[ANN]	REMOTE ANNUNCIATOR (EST KPDISP)
[MFC-A]	MULTIFUNCTIONAL FIRE CABINET (EST MFC-A)
[P]	PULL STATION (EST SIGA-278)
[S]	SMOKE DETECTOR (EST SIGA-PS, W/ EST BASE SIGA-SB4)
[S]	COMBINATION SMOKE DETECTOR AND CO DETECTOR (EST SIGA2-PCOS) W/ EST SIGA-SB4 BASE)
[S]	SMOKE DETECTOR W/ SOUNDER BASE (EST SIGA-PS W/ EST SIGA-AB4G)
[S]	DUCT SMOKE DETECTOR (EST SIGA-SD) W/ SAMPLING TUBE (EST SD-TXX)
[R]	REMOTE TEST SIGNAL (EST SD-TRK)
[H]	HEAT DETECTOR (EST SIGA-HRS W/ EST BASE SIGA-SB4)
[L]	STROBE UNIT (EST G1RF-VM)
[F]	SPEAKER/STROBE UNIT (EST GARF-S7VM)
[C]	CONTROL RELAY (EST SIGA-CR)
[C]	SINGLE INPUT RISER MODULE (EST SIGA-CC1)
[M]	SINGLE INPUT MONITOR MODULE (EST SIGA-CT1)
[M]	DUAL MONITOR MODULE (EST SIGA-CT2)
[D]	FLUSH MOUNT DOOR HOLDER (EST 1504-AQNS)
[FP]	FIRE PUMP MONITOR POINT F.B.O. VERIFY LOCATION
[TS]	TAMPER SWITCH F.B.O. VERIFY LOCATION
[FS]	WATER FLOW SWITCH F.B.O. VERIFY LOCATION
[J]	JUNCTION BOX (PROVIDED BY E.C.)
[V]	FIREMEN'S PHONE JACK (EST 6831-2)
[PC]	POLYCARBONATE SHIELD
[WG]	WIRE GUARD
[WP]	WEATHERPROOF
[EX]	EXISTING DEVICE

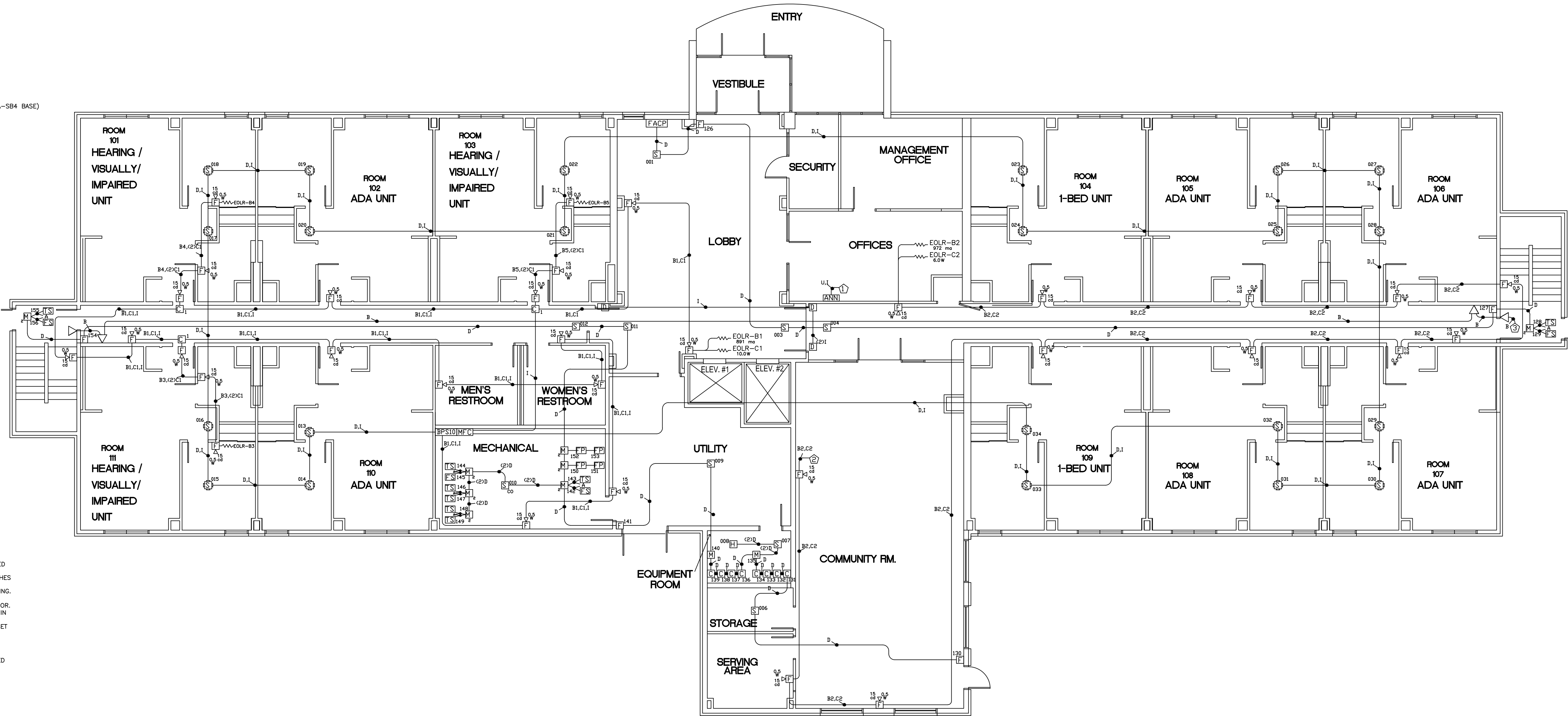
NOTE: REFER TO INDIVIDUAL DEVICE DATA SHEET
FOR ROUGH IN OPTIONS
NOTE: NOT ALL SYMBOLS ON THIS LEGEND WILL APPEAR ON THIS PROJECT

FIRE ALARM TAGGED NOTES

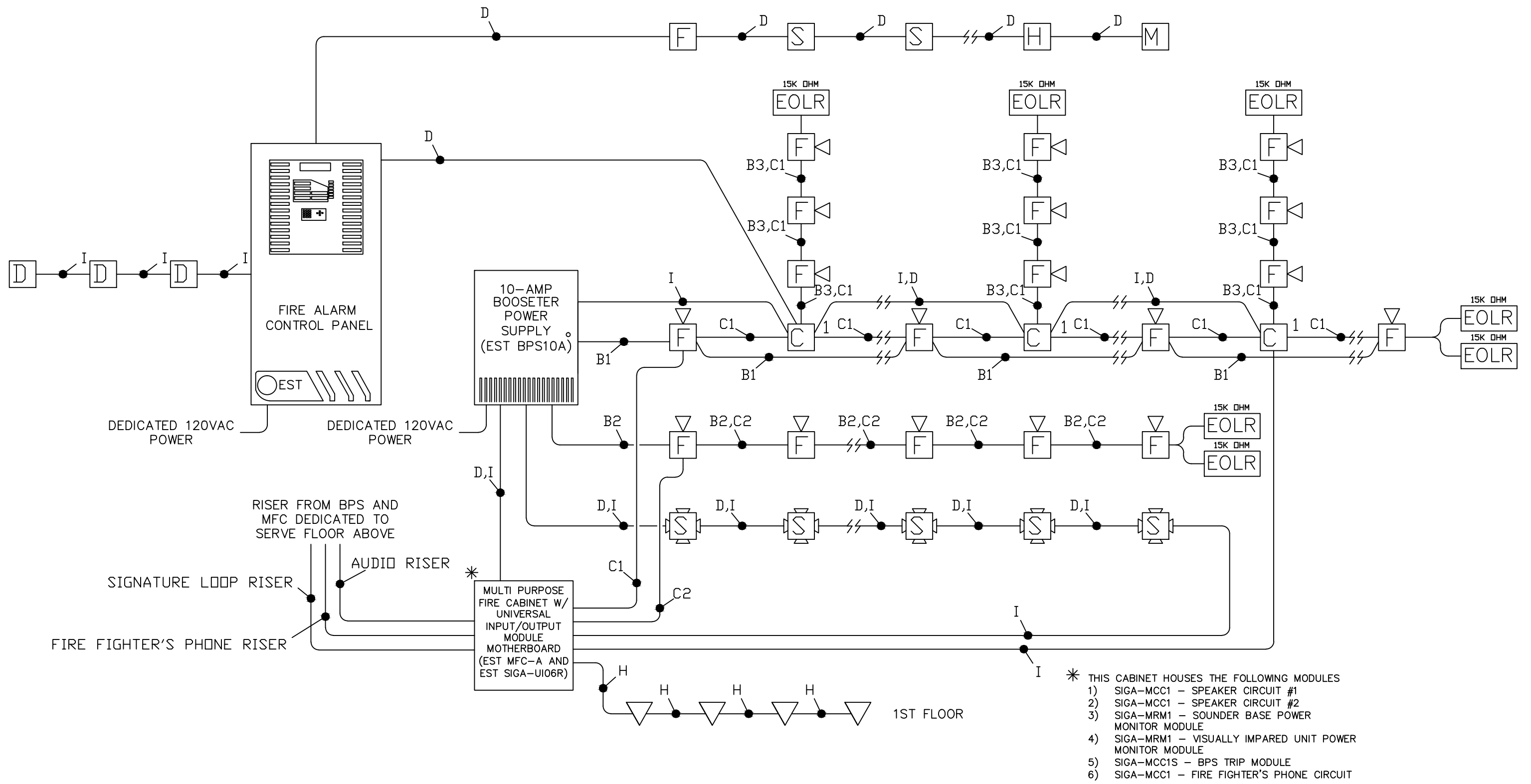
1. HOMERUN CABLE TO FIRE ALARM CONTROL PANEL
2. HOMERUN CABLE TO BOOSTER POWER SUPPLY DEDICATED TO THIS FLOOR
3. HOMERUN CABLE TO MULTIFUNCTIONAL CABINET DEDICATED TO THIS FLOOR
4. SMOKE AND HEAT DETECTORS AT TOP OF ELEVATOR SHAFT ONLY

FIRE ALARM GENERAL NOTES

1. SMOKE DETECTORS SHALL NOT BE MOUNTED WITHIN 3 FEET OF A SUPPLY AIR DIFFUSER
2. HEAT DETECTORS IN ELEVATOR SHAFTS AND MACHINE ROOMS SHALL BE LOCATED WITHIN 2 FEET OF SPRINKLER HEAD
3. MANUAL PULL STATIONS SHALL BE MOUNTED BETWEEN 42 INCHES AND 48 INCHES ABOVE FINISHED FLOOR
4. MANUAL PULL STATIONS SHALL BE LOCATED WITHIN 5 FEET OF THE EXIT OPENING
5. VISUAL AND AUDIO/VISUAL NOTIFICATION APPLIANCES SHALL BE MOUNTED WITH THEIR ENTIRE LENS BETWEEN 80 INCHES AND 96 INCHES ABOVE FINISHED FLOOR
6. VISUAL AND AUDIO/VISUAL APPLIANCES IN CORRIDORS SHALL BE LOCATED WITHIN 15 FEET OF THE END OF THE CORRIDOR OR ANY CHANGE IN DIRECTION
7. UNLESS OTHERWISE NOTED ALL VISUAL APPLIANCES IN CORRIDORS SHALL BE SET AT 15cd AND IN ROOMS TO 30cd
8. DUCT MOUNTED SMOKE DETECTORS ARE REQUIRED ON THE RETURN OF HVAC UNITS GREATER THAN 2,000 CFM AND SUPPLY OF HVAC UNIT LARGER THAN 15,000 CFM
9. SHUT DOWN OF ALL DUCT MOUNTED SMOKE DETECTORS SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR AND OR HVAC CONTRACTOR
10. REMOTE STATION MONITORING BY:
EMERGENCY TWENTY-FOUR, INC.
4179 W. IRVING PARK ROAD
CHICAGO, IL 60641
11. NOT ALL LEGEND SYMBOLS OR SHEET NOTES ARE USED ON EVERY DRAWINGS WITHIN THIS SET
12. ALL DEVICES ARE NOT TO SCALE THEY ARE OVERSIZED FOR CLARITY
13. EVERY DEVICE SHOWN ON DRAWING SHALL HAVE AN APPROPRIATE SIZED BACK BOX. SEE SUBMITTAL CUT SHEETS FOR PROPER SIZE NEEDED FOR EACH DEVICE
14. THE CONDUIT/CABLE RUNS SHOWN ON THE DRAWING DO NOT REPRESENT THE ACTUAL LAYOUT. ACTUAL LAYOUT OF THE CONDUIT/CABLE RUNS IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. THE DIAGRAM IS FOR CIRCUITING PURPOSES. NOTE CHANGES ON DRAWINGS FOR AS-BUILT PURPOSES.



EST3 PANEL WIRING LEGEND					
REF	CIRCUIT TYPE	GAUGES	DESCRIPTION	NOTES	RECOMMENDED CABLE
A	INITIATING DEVICE CIRCUIT (IDC)	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	INPUT CIRCUITS ON 3-IDC1 AND MODULES (CT1, CT2, WTM, MM, UM AND MAB)	WPW 980
B	NOTIFICATION APPLIANCE CIRCUIT (NAC) 24 VDC	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	OUTPUT CIRCUITS ON ZAB-2 AND MODULES (CC1, CC2, UM AND MAB)	WPW 994
C	NOTIFICATION APPLIANCE (NAC) AUDIO	18 AWG TO 12 AWG	TWISTED PAIR - FPLR, FPL, FPLP	3-ZAxx TO CC1 & CC2 AND SPEAKERS	WPW 990
D	SIGNATURE ANALOG ADDRESSABLE LOOP	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	LOOP CONTROLLER (3-SSDC1) TO SIGNATURE DEVICES	WPW 980
E	ANALOG ADDRESSABLE LOOP	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	3-AACT1 TO ADDRESSABLE DEVICES (NOT SIGNATURE)	
F	REMOTE TEST STATION CABLE	18 AWG	TFN/THHN, FPL, FPLR, FPLP	REMOTE TEST STATION CABLE	
H	FIREMEN'S TELEPHONE	18 AWG TO 12 AWG	1 PAIR TWISTED SHIELDED	3-ASU TO CC1, CC1 TO JACK/STATION	WPW 291
I	24 VDC POWER DISTRIBUTION	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	4 WIRE DETECTOR/RELAY/ANNC. AWG DEPENDS ON VOLTAGE DROP	WPW 994
K	SECURITY (3-SAC) BUS	18 AWG TO 14 AWG	FPLR, FPL, FPLP	3-SAC TO CRC AND KPDISP	
L	CARD/PIN READER	22 AWG TO 16 AWG	FPLR, FPL, FPLP OR CM, CMR, CMP	CRC TO CARD/PIN READER	
M	SECURITY DEVICE CIRCUIT	22 AWG TO 16 AWG	FPLR, FPL, FPLP OR CM, CMR, CMP	CRC OR SEC-2 TO DOOR CONTACT/REQUEST TO EXIT	
N	RELAY MODULE (FSRRM)	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	5 DRY CONTACT RELAYS FORM C CONFIGURABLE AS ZONE OR COMMON	
R	CD TELEPHONE LINE	SUPPLIED WITH 3-MODCOM	SUPPLIED WITH 3-MODCOM	3-MODCOM TO RJ31X, 7 FEET, PLUG TO PLUG, CABLE EST P/N 3601377	
S	RS-232 COMMUNICATIONS PRINTER/FIREWORKS	22 OR 18 AWG 4 COND. MIN.	FPLR, FPL, FPLP OR CM, CMR, CMP	50 FEET MAX. PANEL TO PRINTER OR FROM PANEL TO FIREWORKS	
T	AUDIO NETWORK	18 AWG TO 12 AWG	FPLR, FPL, FPLP	5000 FEET MAX BETWEEN ANY THREE PANELS	
U	RS-485 COMMUNICATIONS NETWORK	18 AWG TO 12 AWG	FPLR, FPL, FPLP	5000 FEET MAX BETWEEN ANY THREE PANELS	WPW D980
W	NETWORK FIBER OPTICS	9/125 SINGLEMODE 62.5/125 mm DR 100/140 mm MULTIMODE CAT 5E/6	DFNR, DFNP	FIBER OPTIC (3-FIBMB) CARD	
X	NETCDM-16D ROUTER CABLE (ETHERNET)		CMR, CMP, CMG, CM	CABLE FROM FIREWORKS TO NETCDM-16D (300 ft MAX)	
Y	FIREWORKS SHORT HAUL MODEMS (FW-XPCI/FW-XPL1)	26 AWG MIN. (4 CONDUCTOR)	TWISTED PAIRS TELEPHONE CABLE	CABLE FOR MODEM TO MODEM CONNECTIONS (FW-XPCI/FW-XPL1)	



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EDWARDS SYSTEMS

CALIFORNIA SQUARE
APARTMENTS
LOUISVILLE, KY

DISC
1ST FLOOR F.A. PLAN

JOB
JOB NUMBER

DRAWN
JLB

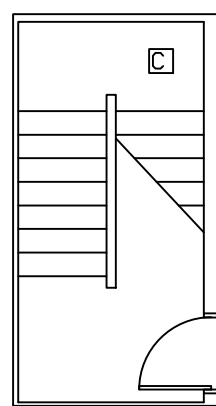
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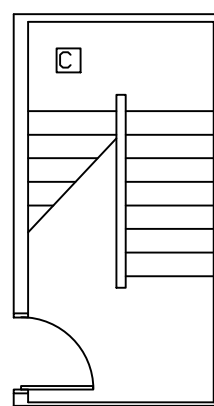
LAST DATE REVISED
04-25-2012

REF.
E2

SHEET
F1



STAIR #1 TO ROOF



STAIR #2 TO ROOF

EOLR-B1
1192 mo

F.A. SPEAKER/STROBE LOCATED AT
4TH AND 7TH FLOOR LANDINGS

F.A. SPEAKER/STROBE LOCATED AT
4TH AND 7TH FLOOR LANDINGS

NOTE: ROOM NUMBERS ARE NOT INDICATIVE OF FINAL NUMBERING
SCHEME
NOTE: X IN ROOM NUMBER IS A REFERENCE TO FLOOR NUMBER

ROOM VARIES PER FLOOR
2ND FLOOR - ARTS AND CRAFTS
3RD FLOOR - SERVICE COORDINATOR
4TH FLOOR - LAUNDRY
5TH FLOOR - STORAGE
6TH FLOOR - STORAGE
7TH FLOOR - BOILER ROOM

FIRE ALARM LEGEND

FACP	FIRE ALARM CONTROL PANEL (EST EST3 SERIES. SEE SUBMITTAL BOOK)
BPS10	BOOSTER POWER SUPPLY (EST BPS-10A)
ANN	REMOTE ANNUNCIATOR (EST KPDISP)
MFC	MULTIFUNCTIONAL FIRE CABINET (EST MFC-A)
P	PULL STATION (EST SIGA-278)
S	SMOKE DETECTOR (EST SIGA-PS, W/ EST BASE SIGA-SB4)
CS	COMBINATION SMOKE DETECTOR AND CO DETECTOR (EST SIGA2-PC05) W/ EST SIGA-SB4 BASE)
SS	SMOKE DETECTOR W/ SOUNDER BASE (EST SIGA-PS W/ EST SIGA-AB4G)
SD	DUCT SMOKE DETECTOR (EST SIGA-SD) W/ SAMPLING TUBE (EST SD-TXX)
R	REMOTE TEST SIGNAL (EST SD-TRK)
H	HEAT DETECTOR (EST SIGA-HRS W/ EST BASE SIGA-SB4)
L	STROBE UNIT (EST G1RF-VM)
FS	SPEAKER/STROBE UNIT (EST G4RF-S7VM)
CR	CONTROL RELAY (EST SIGA-CR)
CC1	SINGLE INPUT RISER MODULE (EST SIGA-CC1)
CT1	SINGLE INPUT MONITOR MODULE (EST SIGA-CT1)
CT2	DUAL MONITOR MODULE (EST SIGA-CT2)
1504-AQNS	FLUSH MOUNT DOOR HOLDER (EST 1504-AQNS)
F.P.M.P.	FIRE PUMP MONITOR POINT F.B.O. VERIFY LOCATION
TS	TAMPER SWITCH F.B.O. VERIFY LOCATION
WFS	WATER FLOW SWITCH F.B.O. VERIFY LOCATION
J	JUNCTION BOX (PROVIDED BY E.C.)
FD	FIREMEN'S PHONE JACK (EST 6831-2)
PC	POLYCARBONATE SHIELD
WG	WIRE GUARD
WP	WEATHERPROOF
EX	EXISTING DEVICE

NOTE: REFER TO INDIVIDUAL DEVICE DATA SHEET
FOR ROUGH IN OPTIONS
NOTE: NOT ALL SYMBOLS ON THIS LEGEND WILL APPEAR ON THIS PROJECT

FIRE ALARM TAGGED NOTES

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2. HOMERUN CABLE TO BOOSTER POWER SUPPLY DEDICATED TO THIS FLOOR
3. HOMERUN CABLE TO MULTIFUNCTIONAL CABINET DEDICATED TO THIS FLOOR
4. SMOKE AND HEAT DETECTORS AT TOP OF ELEVATOR SHAFT ONLY

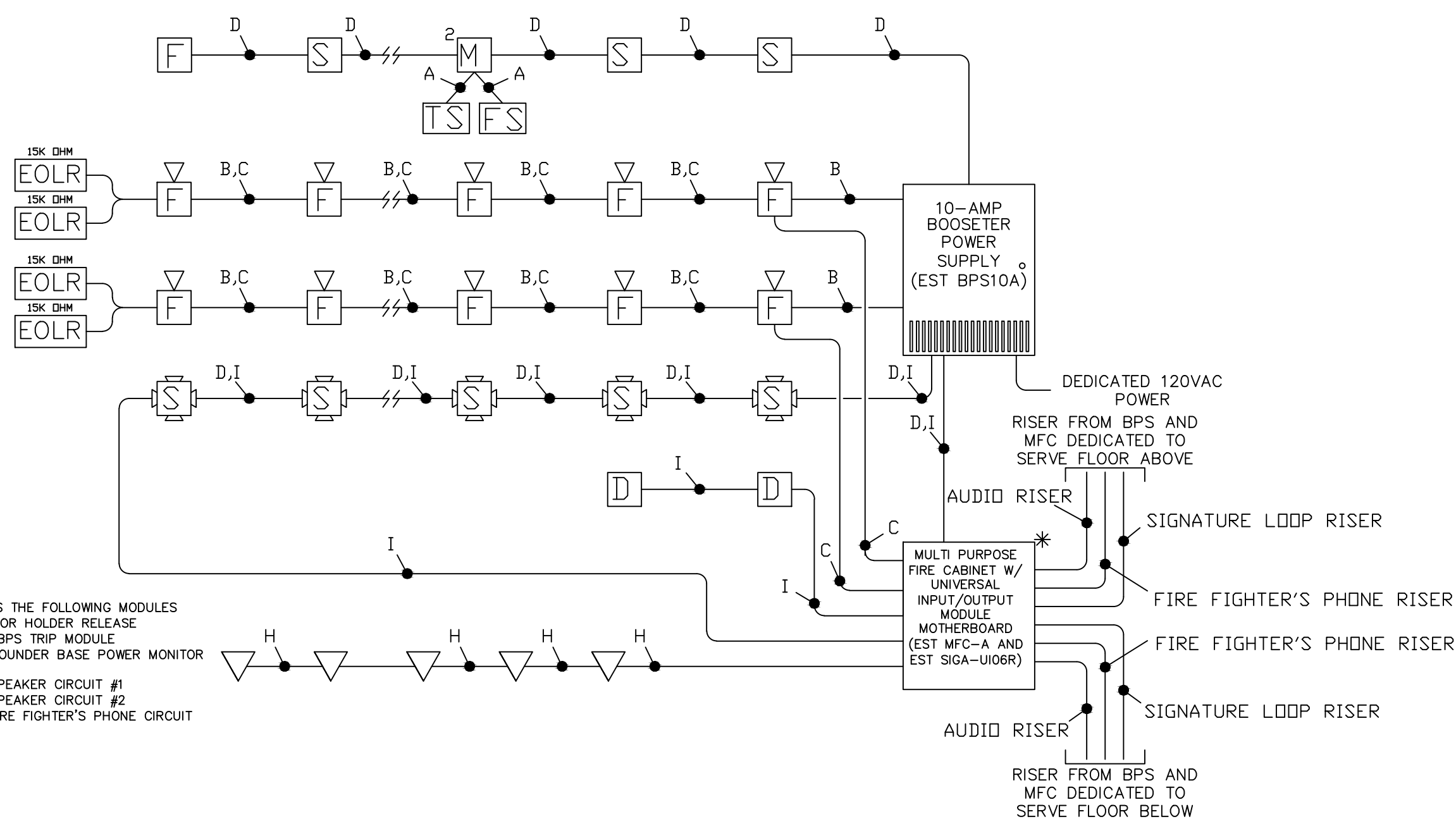
FIRE ALARM GENERAL NOTES

1. SMOKE DETECTORS SHALL NOT BE MOUNTED WITHIN 3 FEET OF A SUPPLY AIR DIFFUSER
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3. MANUAL PULL STATIONS SHALL BE MOUNTED BETWEEN 42 INCHES AND 48 INCHES ABOVE FINISHED FLOOR
4. MANUAL PULL STATIONS SHALL BE LOCATED WITHIN 5 FEET OF THE EXIT OPENING. VISUAL AND AUDIO/VISUAL NOTIFICATION APPLIANCES SHALL BE MOUNTED WITHIN 15 FEET OF THE END OF THE CORRIDOR OR ANY CHANGE IN DIRECTION.
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TYPICAL FLOOR

2ND FLOOR- 7TH FLOOR FIRE ALARM LAYOUT

EST3 PANEL WIRING LEGEND					
REF	CIRCUIT TYPE	GAUGES	DESCRIPTION	NOTES	RECOMMENDED CABLE
A	INITIATING DEVICE CIRCUIT (IDC)	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	INPUT CIRCUITS ON 3-IDC8 AND MODULES (CT1, CT2, VTM, MM, UM AND MAB)	WPW 980
B	NOTIFICATION APPLIANCE CIRCUIT (NAC) 24 VDC	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	OUTPUT CIRCUITS ON ZAB-2 AND MODULES (CC1, CC2, UM AND MAB)	WPW 994
C	NOTIFICATION APPLIANCE (NAC) AUDIO	18 AWG TO 12 AWG	TWISTED PAIR - FPLR, FPL, FPLP	3-ZAxx TO CC1 & CC2 AND SPEAKERS	WPW 990
D	SIGNATURE ANALOG ADDRESSABLE LOOP	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	LOOP CONTROLLER (3-SSDC1) TO SIGNATURE DEVICES	WPW 980
E	ANALOG ADDRESSABLE LOOP	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	3-MADC1 TO ADDRESSABLE DEVICES (NOT SIGNATURE)	
F	REMOTE TEST STATION CABLE	18 AWG	TFN/THHN, FPL, FPLR, FPLP	REMOTE TEST STATION CABLE	
G	FIREMEN'S TELEPHONE	18 AWG TO 12 AWG	1 PAIR TWISTED SHIELDED	3-ASU TO CC1, CC1 TO JACK/STATION	WPW 291
H	24 VDC POWER DISTRIBUTION	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	4 WIRE DETECTOR/RELAY/ANNC. AWG DEPENDS ON VOLTAGE DROP	WPW 994
K	SECURITY (3-SAC) BUS	18 AWG TO 14 AWG	FPLR, FPL, FPLP	3-SAC TO CRC AND KPDISP	
L	CARD/PIN READER	22 AWG TO 16 AWG	FPLR, FPL, FPLP OR CM, CMR, CMP	CRC TO CARD/PIN READER	
M	SECURITY DEVICE CIRCUIT	22 AWG TO 16 AWG	FPLR, FPL, FPLP OR CM, CMR, CMP	CRC OR SEC-2 TO DOOR CONTACT REQUEST TO EXIT	
N	RELAY MODULE (FSRRM)	18 AWG TO 12 AWG	TFN/THHN, FPL, FPLR, FPLP	5 DRY CONTACT RELAYS FORM C CONFIGURABLE AS ZONE OR COMMON	
R	CO TELEPHONE LINE	SUPPLIED WITH 3-MODCOM	SUPPLIED WITH 3-MODCOM	3-MODCOM TO RJ31X, 7 FEET, PLUG TO PLUG, CABLE EST P/N 3601377	
S	RS-232 COMMUNICATIONS PRINTER/FIREWORKS	22 OR 18 AWG 4 COND. MIN.	FPLR, FPL, FPLP OR CM, CMR, CMP	50 FEET MAX. PANEL TO PRINTER OR FROM PANEL TO FIREWORKS	
T	AUDIO NETWORK	18 AWG TO 12 AWG	FPLR, FPL, FPLP	5000 FEET MAX BETWEEN ANY THREE PANELS	
U	RS-485 COMMUNICATIONS NETWORK	18 AWG TO 12 AWG	FPLR, FPL, FPLP	5000 FEET MAX BETWEEN ANY THREE PANELS	WPW D980
W	NETWORK FIBER OPTICS	9/125 SINGLEMODE 62.5/125 mm OR 100/140 mm MULTIMODE CAT 5E/6	DFNR, DFNP	FIBER OPTIC (3-FIBMB) CARD	
X	NETCOM-16D ROUTER CABLE (ETHERNET)		CMR, CMP, CMG, CM	CABLE FROM FIREWORKS TO NETCOM-16D (300 FT MAX)	
Y	FIREWORKS SHORT HAUL MODEMS (FW-XPC1/FW-XPL1)	26 AWG MIN. (4 CONDUCTOR)	TWISTED PAIRS TELEPHONE CABLE	CABLE FOR MODEM TO MODEM CONNECTIONS (FW-XPC1/FW-XPL1)	



- * THIS CABINET HOUSES THE FOLLOWING MODULES
- 1) SIGA-MCR - DOOR HOLDER RELEASE
 - 2) SIGA-MC01S - BPS TRIP MODULE
 - 3) SIGA-MRM1 - SOUNDER BASE POWER MONITOR MODULE
 - 4) SIGA-MC01 - SPEAKER CIRCUIT #1
 - 5) SIGA-MC01 - SPEAKER CIRCUIT #2
 - 6) SIGA-MC01 - FIRE FIGHTER'S PHONE CIRCUIT



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EDWARDS SYSTEMS TECHNOLOGY **EST**™

CALIFORNIA SQUARE
APARTMENTS
LOUISVILLE, KY

DISC
END-7TH FLOOR
F.A. LAYOUT

JOB
JOB NUMBER

DRAWN
JLB

APPROVED BY
DS

SCALE

1/8"=1'-0

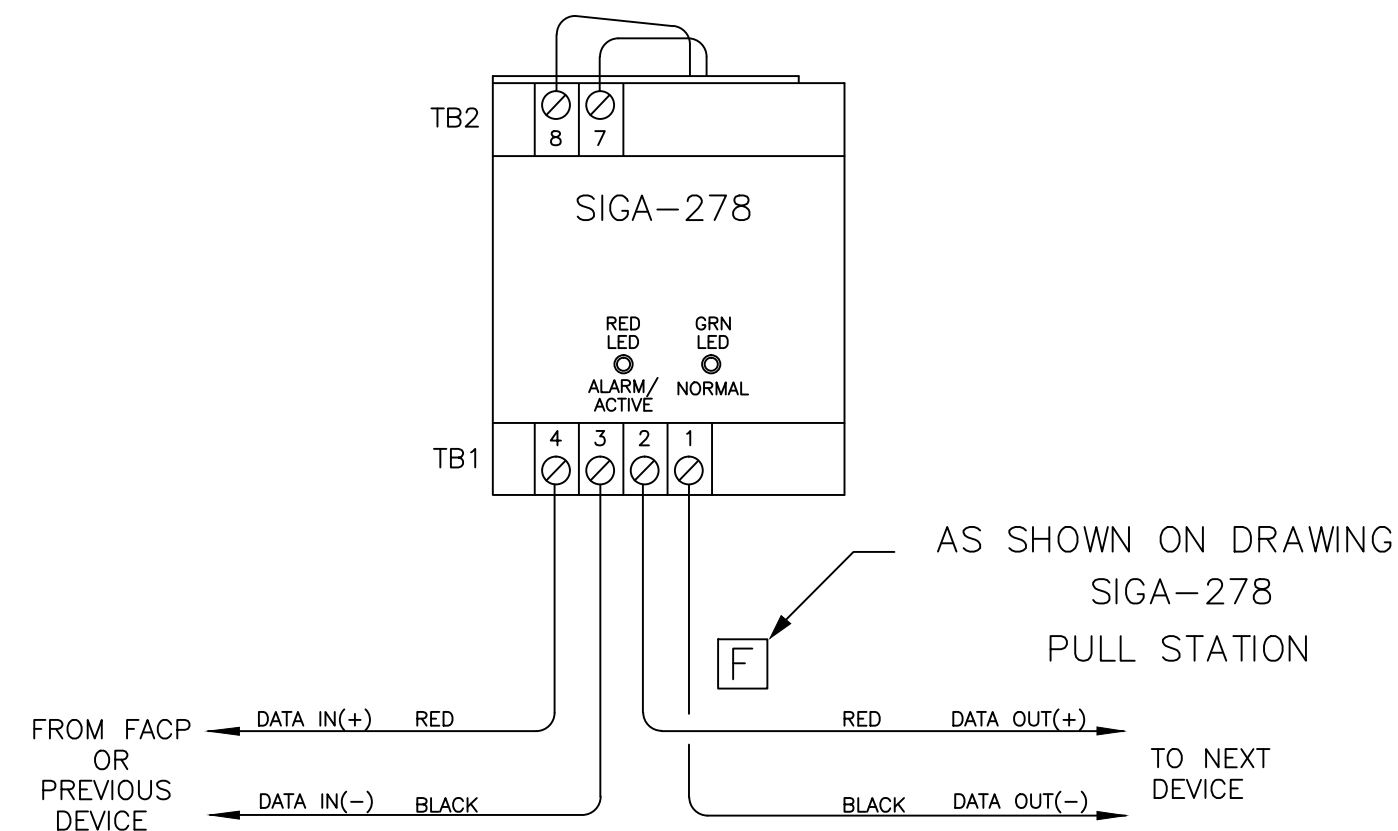
LAST DATE REVISED

04-25-2012

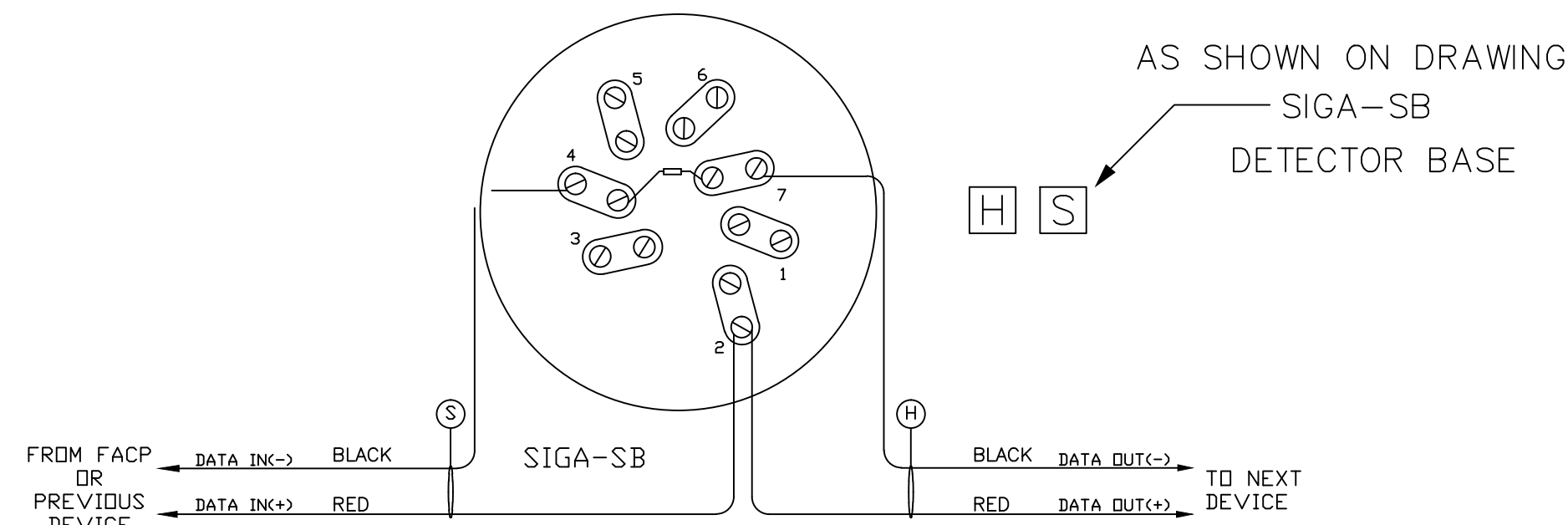
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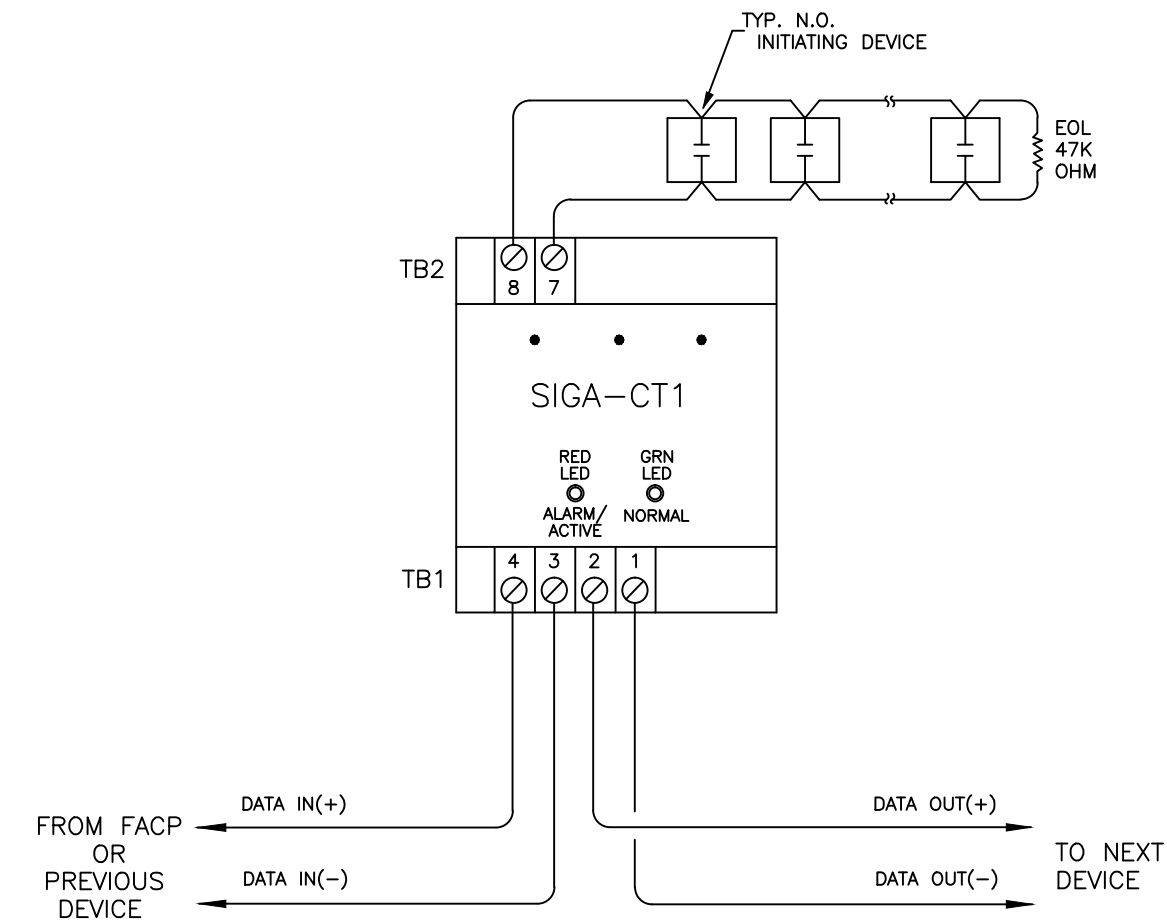
SHEET
F2



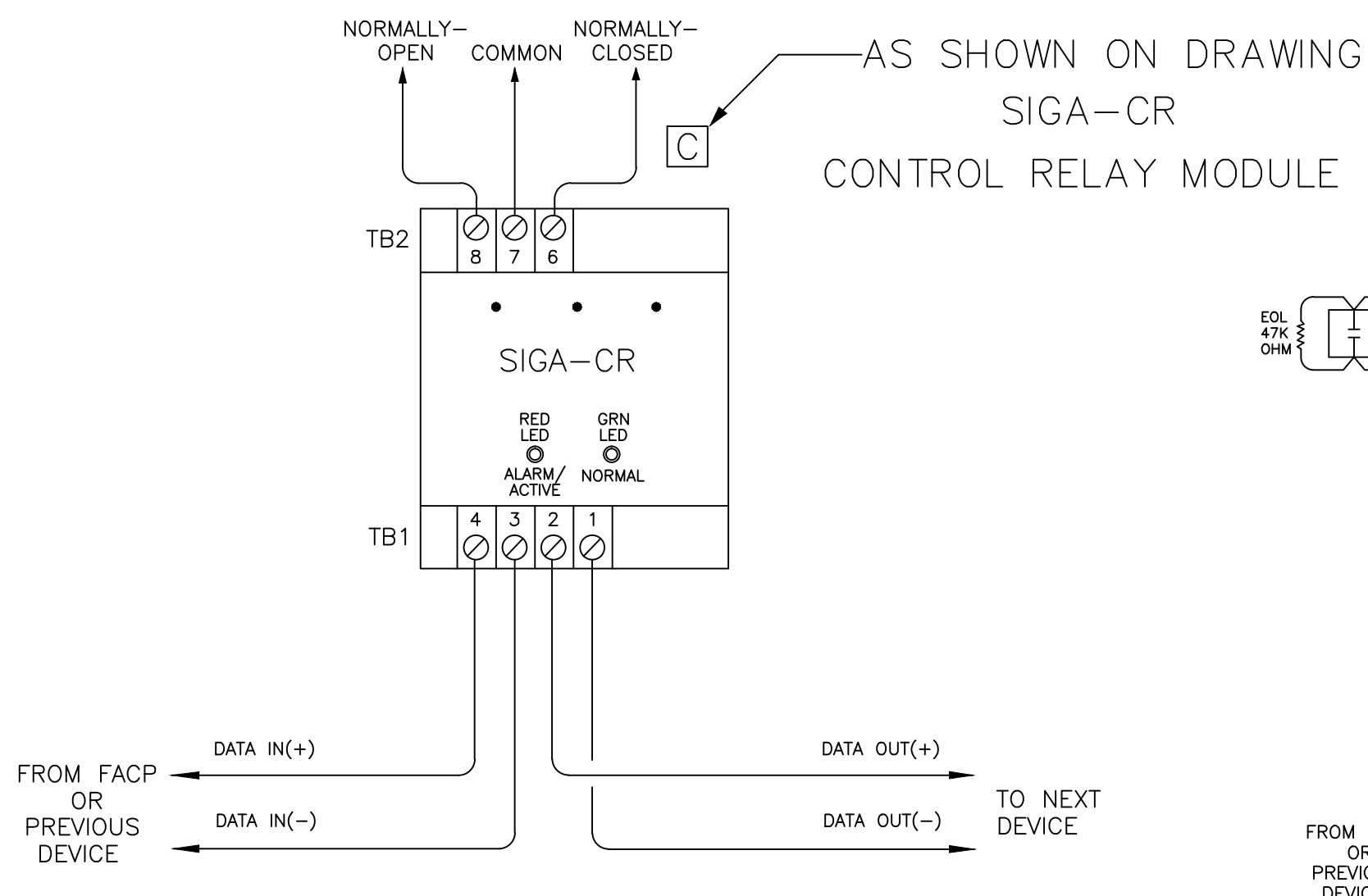
MANUAL PULL STATION SINGLE
STAGE WIRING DIAGRAM
N.T.S.



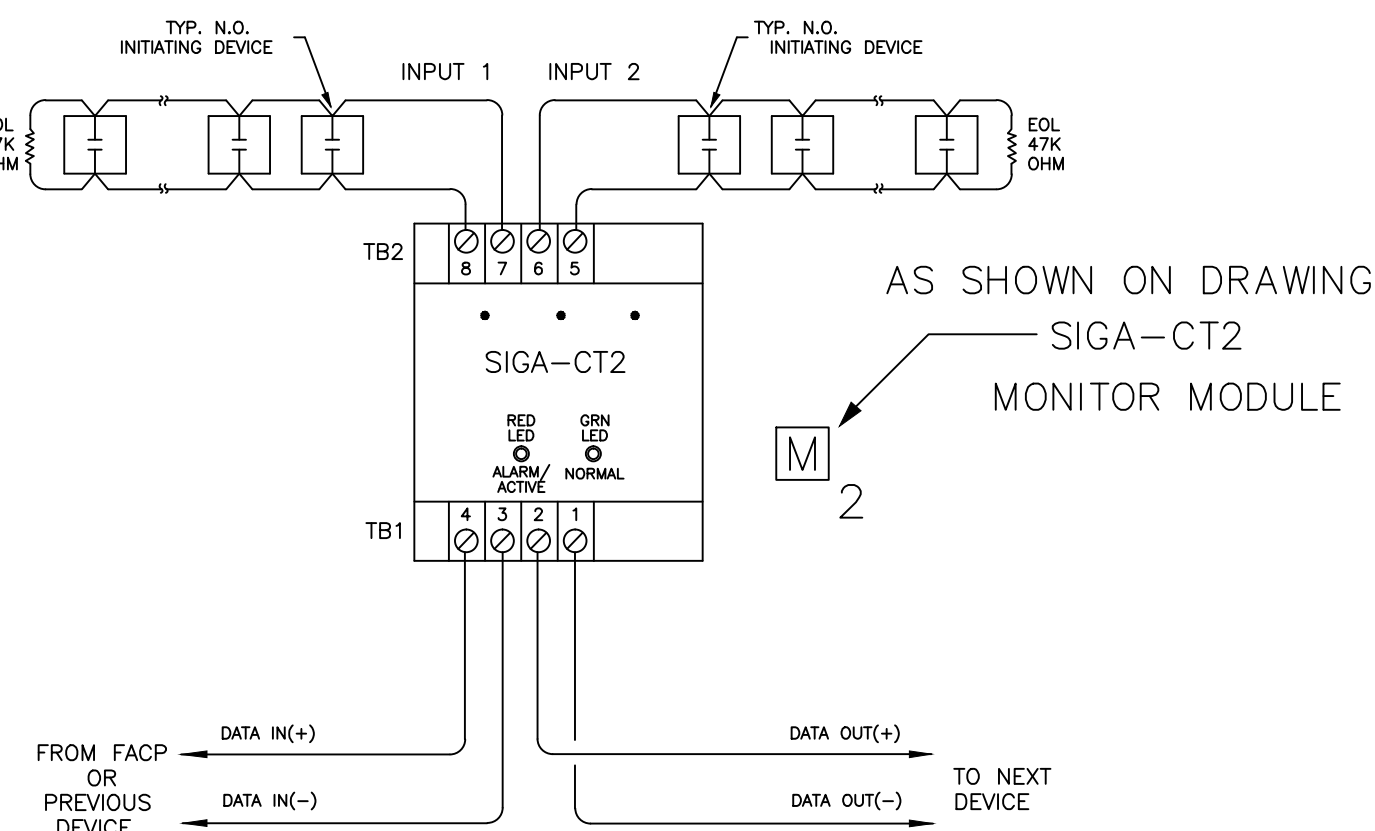
INTELLIGENT DETECTOR
BASE WIRING DIAGRAM
N.T.S.



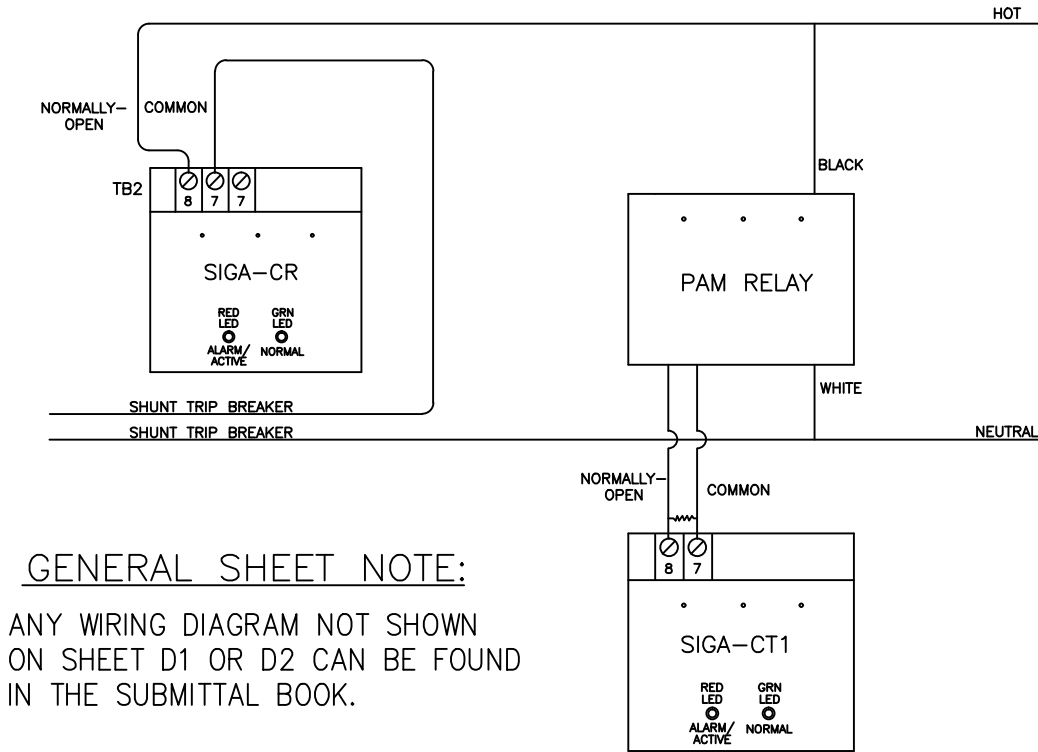
SINGLE INPUT MODULE
WIRING DIAGRAM
N.T.S.



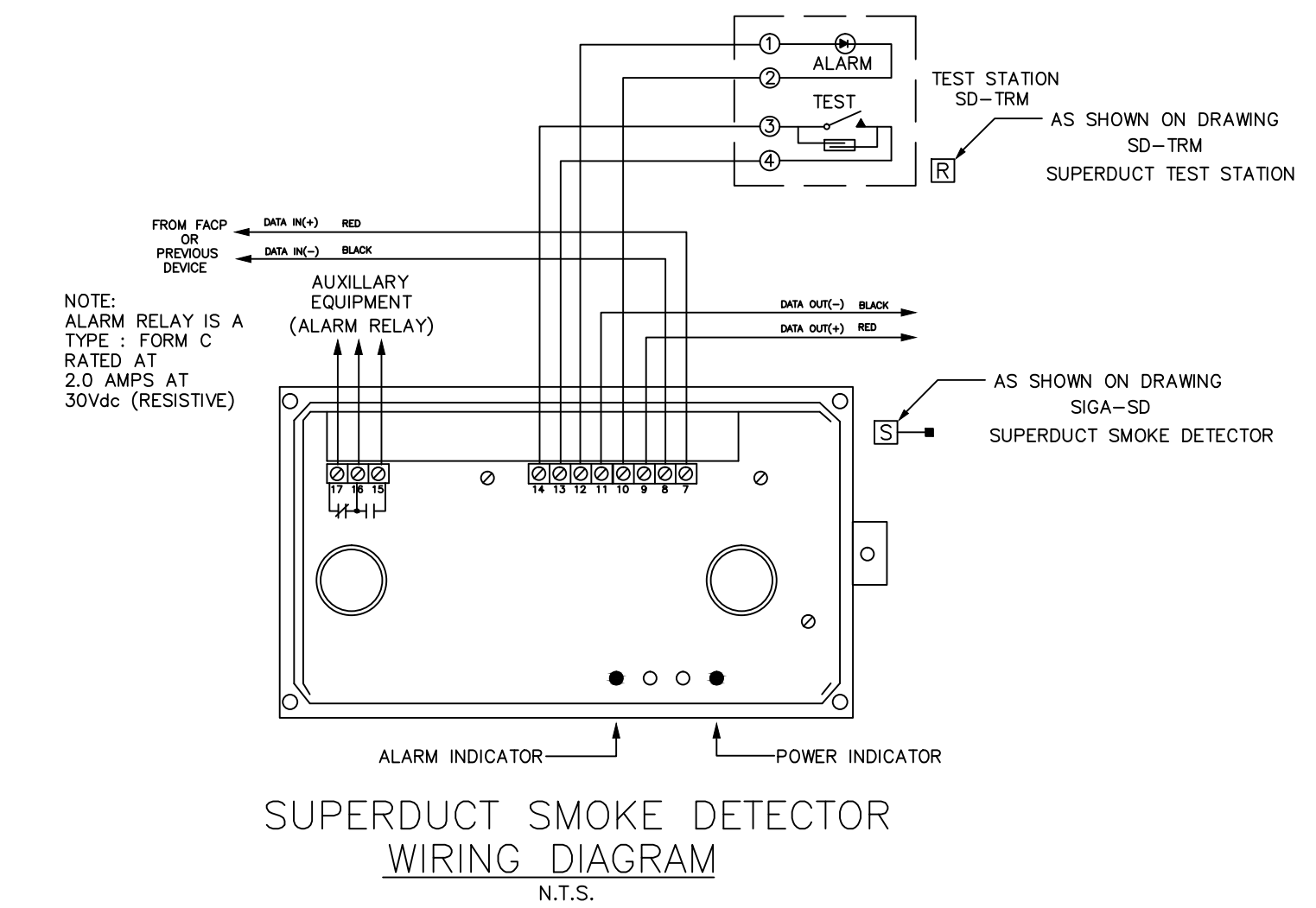
CONTROL RELAY MODULE
WIRING DIAGRAM
N.T.S.



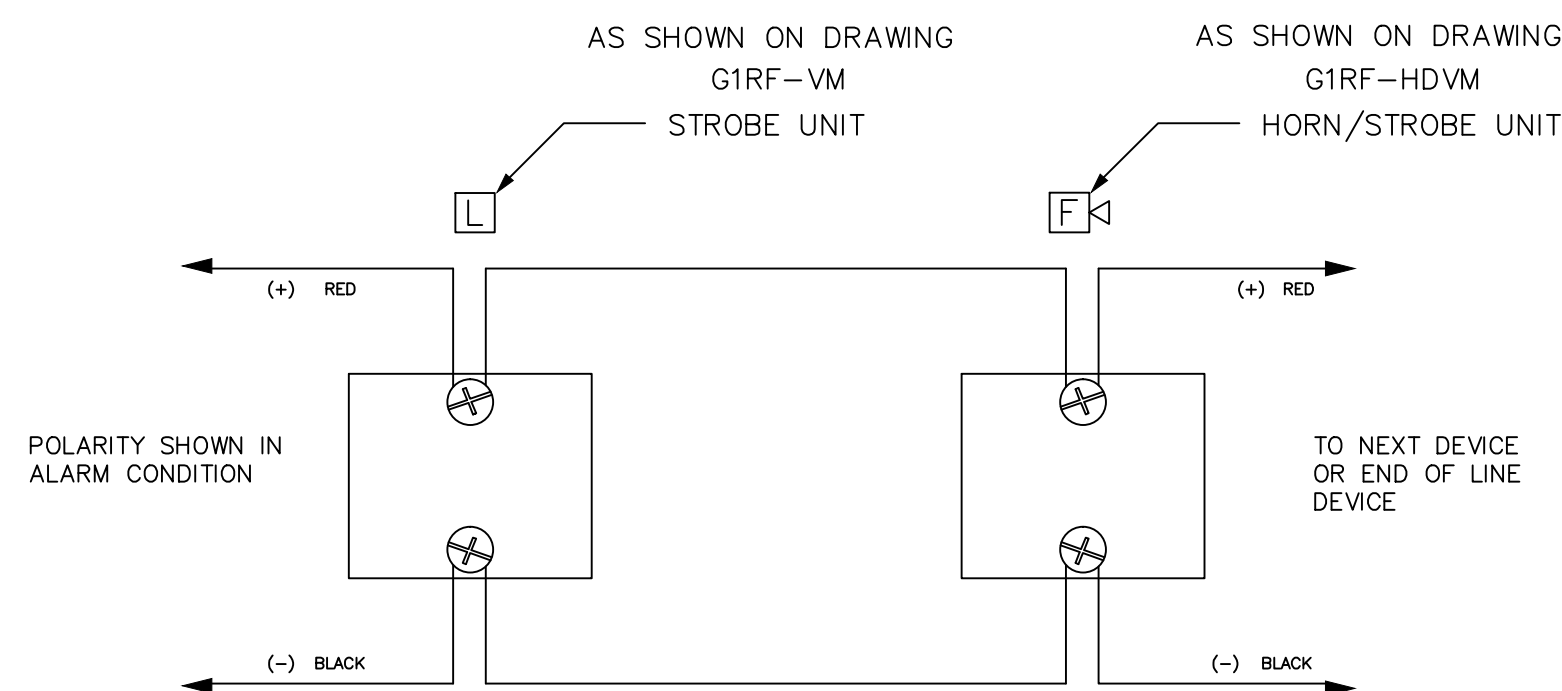
DUAL INPUT MODULE
WIRING DIAGRAM
N.T.S.



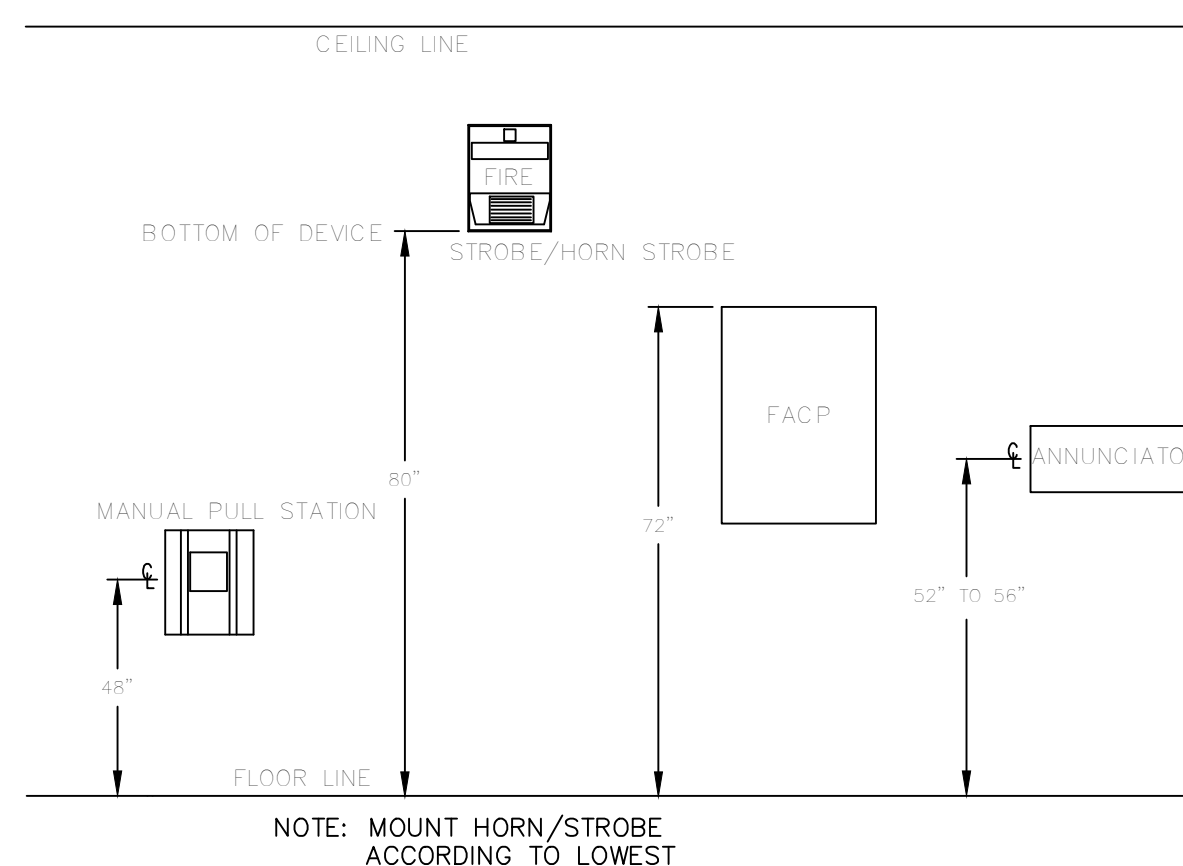
ELEVATOR SHUNT TRIP,
CONTROL & SUPERVISORY
WIRING DIAGRAM
N.T.S.



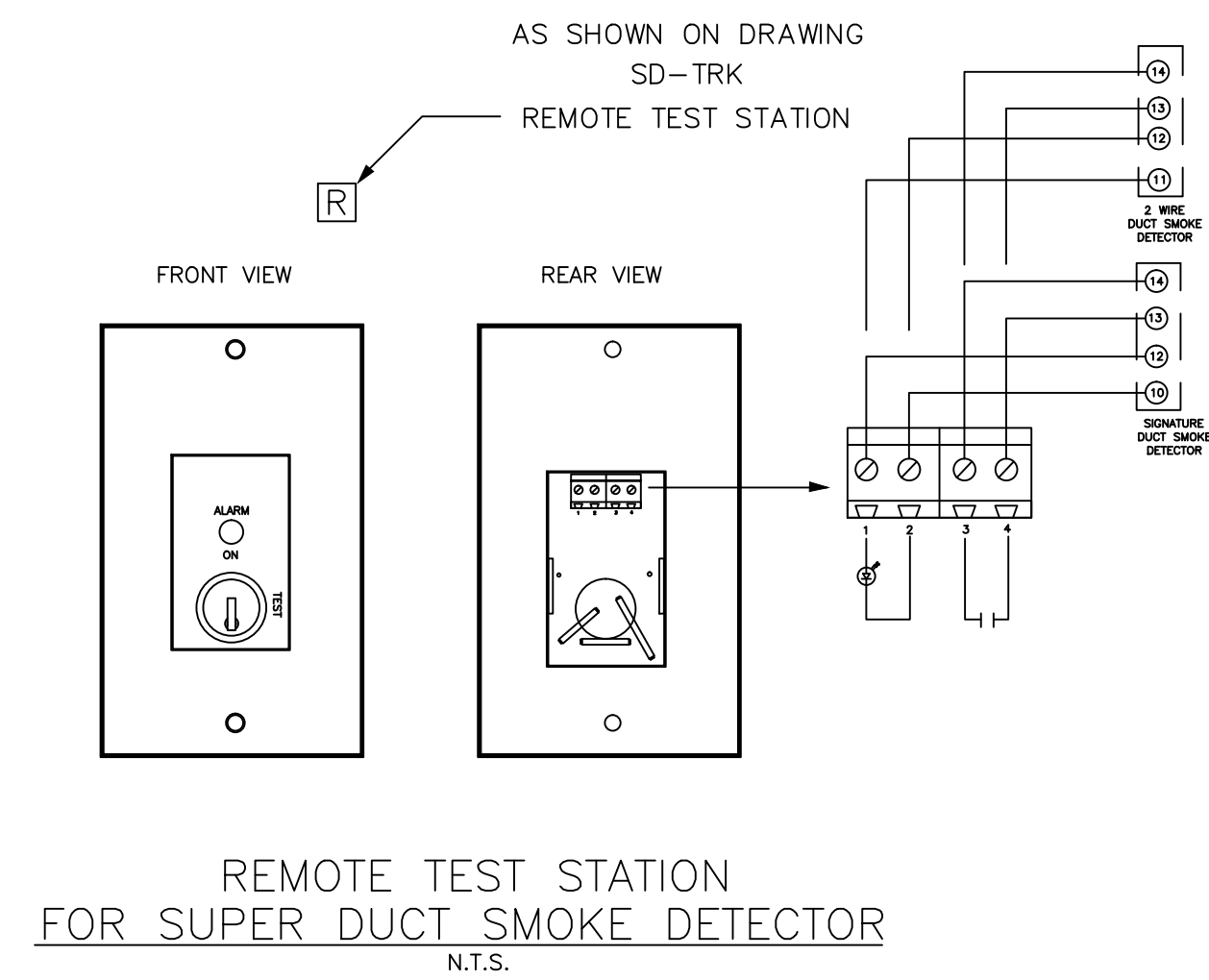
SUPERDUCT SMOKE DETECTOR
WIRING DIAGRAM
N.T.S.



HORN/STROBE UNIT
WIRING DIAGRAM
N.T.S.



DEVICE MOUNTING HEIGHTS
N.T.S.



REMOTE TEST STATION
FOR SUPER DUCT SMOKE DETECTOR
N.T.S.

NURSE CALL SYSTEM

- extension of the fire alarm system



4850 Crittenden Drive • Louisville, KY 40209 • p502.363.8633 • f502.363.8638 • www.alliantintegrators.com

California Square Apartments

Material Submittal

Emergency Call System



4850 Crittenden Dr. • Louisville, KY 40209

Submittal Bill-of-Material

Project: California Square Apartments

Emergency Call System

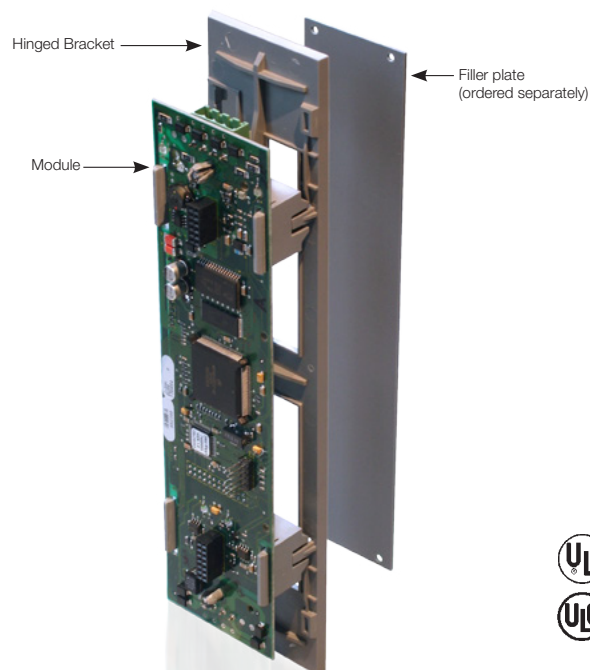
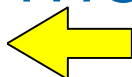
<u>Manufacturer</u>	<u>Part No.</u>	<u>Description</u>
		EST3 Fire Alarm Control Panel (Located In Front Lobby)
EST	3-SAC	Security/Access Control Module, Class B
		Keypad Display (Located In Business Office)
EST	KPDISP	Keypad & Liquid Crystal Display
		Control Equipment (Located In 1st Floor Mechanical Room
Cornell	P-512243A	UL Listed Power Supply
EST	SIGA-UIO6R	Universal I/O Module Motherboard - 6 Position w/ Riser Selection
EST	SIGA-MCT2	Dual Input Module – UIO Motherboard Mount
		Field Devices
Cornell	E-114-3	UL Listed Emergency Station w/ Pull Cord

- The emergency call system will be an extension of the fire alarm system. We will utilize the existing fire alarm control panel to monitor the emergency stations with pull cords in each tenant's bedroom and bathroom. In the event of an emergency, the security keypad/fire alarm remote annunciator in the business office will alert staff and the system will also notify authority personnel via the fire alarm system's dialer and UL listed monitoring agency (Emergency 24). This notification method is consistent with the system that is currently in use at the facility.

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Security/Access Control Module

Model: 3-SAC



Overview

The 3-SAC Security/Access Control Module is a key component in the true integration of security and access control functions into the EST3 multiplexed life safety system. The 3-SAC is the demarcation point between fire and security/access functions. For jurisdictions requiring independent wiring of fire and security devices, the 3-SAC offers two independent circuits. Where fire and security devices are permitted to be connected to the same circuit, both circuits can support both fire and security functions. All security devices that connect to a 3-SAC are designed and tested to strict fire alarm standards. For example, to enhance reliability, the 3-SAC can be wired in a Class A (Style 6) configuration, thus delivering an additional level of system survivability over traditional systems employing Class B wiring.

The 3-SAC can be used in combination with the Modcom Modem Communicator. The Modcom's dialer (DACT) function is used to transmit alarms to one or more central monitoring stations and/or paging terminals. Additionally, information received by the Modcom can be downloaded through the 3-SAC to individual security/access devices. Please refer to the Modcom catalog sheet for additional details.

Total integration of the EST3 system assures that processing of fire alarm signals always receives the highest priority over routine signal processing. Power for the 3-SAC comes from the same highly reliable power supply/battery combination used to power the fire alarm components. Any Control Display module will mount in front of the 3-SAC, allowing great flexibility of the system user interface layout.

Standard Features

- Listed for fire, security, and access control
- Two supervised RS-485 device circuits
- Class A configuration supports 30 Card reader controllers and/or keypad/displays
- Class B configuration supports 62 card reader controllers and/or keypad-displays
- 4,000 ft (1,220 m) max circuit length
- EST3 local rail module
- Supports control/display modules
- Supervised by the network controller
- 100% digital communication
- Removable field wiring terminal block

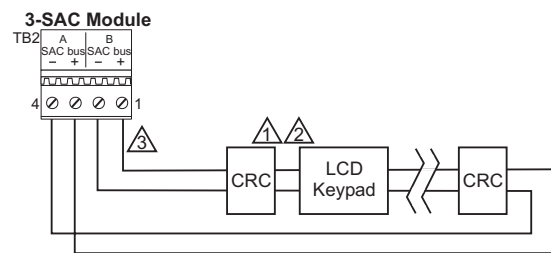
Application

The 3-SAC is used to connect the Card Reader Controllers and Keypad Displays to the EST3 network. This permits the network to perform functions network-wide in response to fire and/or security events. A common example is the network's ability to unlock specified doors in the event of a fire emergency, without the need for hardwired interconnections between fire and access control components.

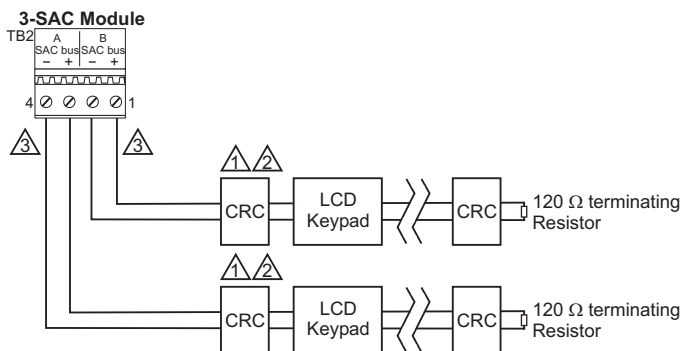
The 3-SAC and a simple program rule are all that is required to unlock the doors. Want to disarm security partitions automatically when an authorized cardholder enters the building, the 3-SAC and another system rule provide a simple solution.

Typical Wiring

Class A wiring



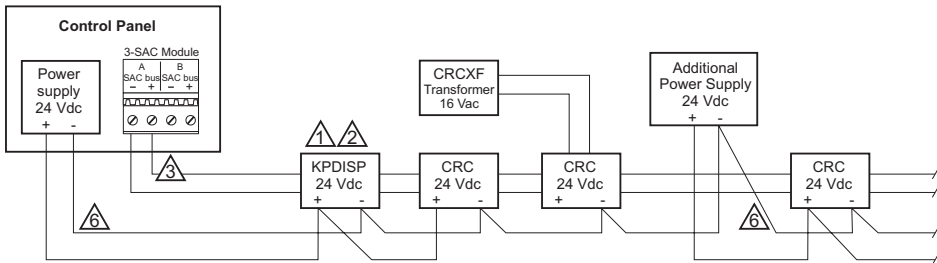
Class B wiring



Notes:

- 1 Refer to device installation sheets for proper wiring connections.
- 2 Maximum of 30 devices (Class A), 62 devices (31 per loop) (Class B).
- 3 Security Access Control Bus
- 4. Up to 4,000 ft. (1,220 m). All wiring is power limited and supervised.
- 5. CRCs require 24Vdc or local transformer for operational power. KPDISP requires 24Vdc for power.
- 6 Continuity of the minus from the control panel's power supply must be maintained with all devices communicating with the panel's 3-SAC.

Class B wiring showing power cabling



Engineering Specification

The security and access control module shall be capable of supporting 62 devices on two class B circuits or where added reliability is required, 30 devices on a single Class A circuit. It must be possible to wire Class A in Style 6 configuration. The module shall be capable of supporting both fire and security devices on the same circuit. The module shall permit total integration of the fire, security and access control functions by the system. The module shall be <ULC> listed for both fire and security applications.

Specifications

Agency Listings	UL, ULC. See Note 1.
Circuit Configuration	Class A or Class B
Circuit Capacity	30 devices on one Class A circuit, 62 devices on two circuits wired Class B
Input Current	40 mA under all conditions
Wire Size	22 AWG to 14 AWG (0.25mm ² to 1.5mm ²)
Wire Type	Unshielded, twisted pair, > 6 twists per foot
Maximum Line Resistance	52 Ohms
Maximum Capacitance	0.1 µF
Operating Environment	0°C to 49° Complete (32°F to 120°F) @ 85%RH, Non-condensing
Mounting	One Local Rail Space

Note 1:

The EST3 is modularly listed under the following standards:

UL 864 categories: UOJZ, UOXX, UUKL and SYZV, UL 294 category ALVY, UL 609 category AOTX, UL 636 category ANET, UL 1076 category APOU, UL 365 category APAW, UL 1610 category AMCX, UL 1635 category AMCX ULC-S527, ULC-S301, ULC-S302, ULC-S303, ULC-S306, ULC/ORD-C1076 and ULC/ORD-C693.

Please refer to EST3 Installation and Service Manual for complete system requirements.

Ordering Information

Catalog Number	Description	Shipping Wt. lb (kg)
3-SAC	Security/Access Control Module	0.5 (.23)
3-FP	Filler Plate, order separately when no LED or LED/Switch module installed.	0.1 (0.05)



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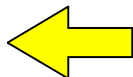
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Keypad/Display

KPDISP



The keypad lies discreetly hidden behind the cover, while the message remains front and center at all times.

Overview

The KPDISP is a combination keypad and dot-matrix display designed for use with the EST3 integrated system. The unit features a large LCD display and telephone-style keypad housed in an attractive Cycloloy® case. A removable cover is provided to prevent accidental keypad activation and protect against dirt.

The KPDISP transmits and receives information from/to the 3-SAC Security Access Control module installed in the EST3 system. Communications between the KPDISP and the 3-SAC are supervised, providing the ultimate in reliability. Credential holder information is encrypted to provide an additional level of security. KPDISP data is stored in non-volatile memory. Power to the KPDISP is provided by the EST3, ensuring a reliable, supervised and backed-up power source.

The KPDISP supports bilingual operation, and can be programmed to automatically display the language of the user.

The display is backlit, and lights whenever a key is pushed. An automatic timer extinguishes the light after a brief delay. The keypad features tactile and audible feedback and is backlit at all times. To aid in locating the keypad in the dark, the back lighting is visible even with the cover closed.

Standard Features

- Listed for fire and security
- 128 x 64 backlit dot matrix LCD display
- Telephone style keypad with tactile & audible feedback
- Aesthetically pleasing design
- Removable protective cover
- 200 users and 9999 pin codes
- Supports bilingual operation
- Integral help function
- Menu driven
- Non-volatile memory
- Electronic addressing

Application

All operations are menu driven. The most common use of the KPDISP is arming and disarming security partitions. The KPDISP may be optionally configured to display on its LCD the primary partition's status, i.e.: whether it is armed or disarmed. This option provides an added measure of security in situations that warrant it. The display also permits a user to identify off-normal points and take corrective action. If the problems can't be corrected, the user can have the option to bypass a point before arming the system.

When used with EST3 and the 3-MODCOM, openings and closing may be sent automatically to a central monitoring station.

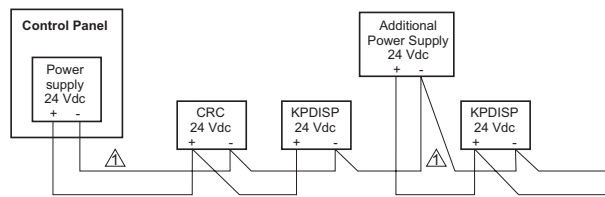
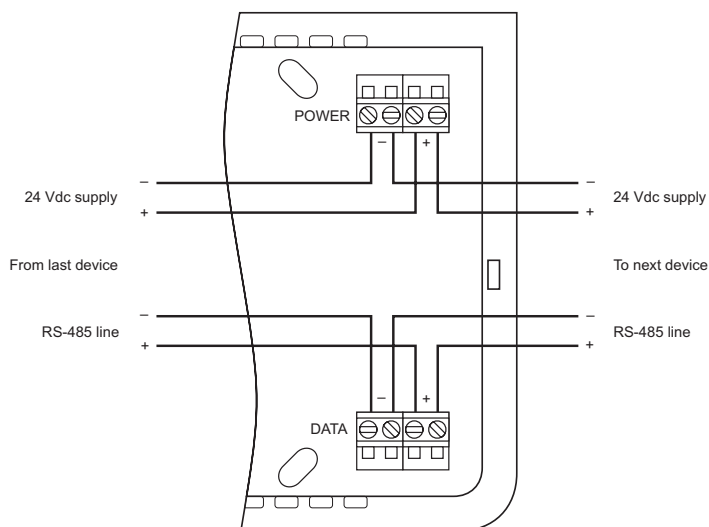
Each of up to 200 authorized users is assigned a pass code consisting of a unique three-digit number and a four-digit PIN number. Duplicate PINs are permitted by the KPDISP, so a user can pick a number that is easy for them to remember.

The KPDISP can also annunciate fire functions and be programmed to act as a full function fire annunciator. In the event of a problem, context-sensitive help is readily available using the HELP button.

Installation

The KPDISP is designed to facilitate installation in a wide variety of indoor applications. The unit can be mounted directly on a wall or using a 4" or 100mm square or 2-gang electrical box. To ensure reliability, terminal blocks are provided for all wiring. One pair carries data in and out of the unit, while the second pair provides power. These specially-designed terminal blocks provide unique features aimed at maintaining system operation during commissioning or servicing. Should a KPDISP be removed from its rear mounting plate, the terminals automatically provide continuity to downstream devices. This helps ensure continued communication with the control panel, despite the removal of a KPDISP from the communication wiring path. The unit features electronic addressing so there are no jumpers or switches to set in the unit.

Typical Wiring



⚠ Minus common from control panel must be maintained.

Engineering Specification

The Security/Access Control user interface shall provide both display and keypad functions to indicate system status and arming/disarming the system. The unit shall support additional display functions such as fire/security annunciation. The display shall be capable of bi-lingual operation under the direction of the system controller and/or access control credential.

The unit shall feature a backlit 128 x 64 dot matrix LCD readout. The keypad shall provide both tactile and audible user feedback to facilitate entry of information. User entries shall be menu driven, and capable of executing system commands. A context sensitive help system shall be available to the user at any time.

All keypad/display addressing shall be electronic, jumpers or DIP switches shall not be considered as equivalent to electronic addressing. All data within the unit shall be stored in non-volatile memory to prevent data loss. The unit shall be constructed of a thermoplastic housing with integral (removable) cover, and be suitable for mounting directly on a finished wall or standard 4" square or 2-gang electrical boxes. All wiring terminations shall be to an integral terminal strip.

<It shall be possible to transmit openings and closing performed at the keypad to the central monitoring station>.

Specifications

Agency Listings	UL, ULC. See Note 1.
Circuit Configuration	Class A or Class B
Power Requirements	24 Vdc @ 38 mA
Wire Size	14 AWG (1.5mm ²) - 22 AWG (0.25mm ²)
Dimensions (HWD)	4 ¾" x 7 ¼" x 1 ¼" (12.7cm x 18.4cm x 3.2cm) - open height 8.72" (22.15cm)
Finish	White high-impact Cycloy®
Communications	RS-485
Supported Languages	English, Spanish, French, Hebrew, Italian, Dutch, Polish, Russian, Turkish, Portuguese, Slovak
Operating Environment	0°C to 49°C Complete (32°F to 120°F) @ 0 to 93%RH, Non-condensing
Mounting	4" or 100mm square or 2-gang electrical boxes
Users	200 max. per KPDISP
Partitions Supported	255 max. per KPDISP

Note 1:

The EST3 is modularly listed under the following standards:

UL 864 categories: UOJZ, UOXX, UUKL and SYZV, UL 294 category ALVY, UL 609 category AOTX, UL 636 category ANET, UL 1076 category APOU, UL 365 category APAW, UL 1610 category AMCX, UL 1635 category AMCX ULC-S527, ULC-S301, ULC-S302, ULC-S303, ULC-S306, ULC/ORD-C1076, ULC/ORD-C693. Please refer to EST3 Installation and Service Manual for complete system requirements.

Ordering Information



Catalog Number	Description	Shipping Wt., lb (kg)
KPDISP	Keypad Display	1 (0.45)
KPDISP-CF	Configuration Software CD ROM	



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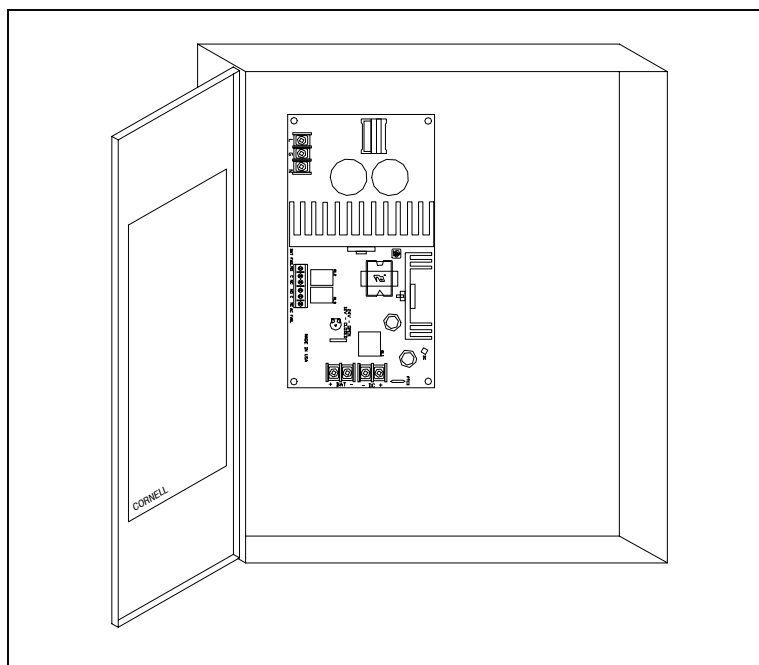
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CORNELL

Emergency Response Systems

→ P-512243A - 12 or 24 Volt, Power Supply



P-512243A

The Cornell P-512243A is UL listed for fire alarm, burglar alarm, access control applications and hospital signaling - nurse call equipment.

Rated Output: 4 amps continuous supply current at 12 VDC and 3 amps continuous supply current at 24 VDC.

Power: 115VAC/60Hz, 1.45 amp. 4 amps continuous supply current at 12VDC (switch closed), 3 amps continuous supply current at 24 VDC (switch open).

Circuit Protection: Short circuit and thermal overload protection.

Termination: Screw terminals.

Exterior: Grey, baked enamel finish.

Dimensions:
13.5" H x 12.75" W x 3.25" D

Indicator LED Diagnostics:

Red-DC	Green-AC	Status
On	On	Normal Operating condition
On	Off	Loss of AC
Off	On	No DC output
Off	Off	Loss of AC Discharged. No DC output

Mounting: Slotted keyholes make it suitable for vertical wall or rack mounting.

ENGINEERING SPECIFICATIONS

The contractor shall furnish and install a **CORNELL P-512243A** Power Supply for use with the CORNELL Series. The power supply shall operate at 115 volts AC 60Hz. Enclosures provided with cam lock and field wiring on the units shall utilize screw terminals.

1-800-558-8957

CORNELL COMMUNICATIONS, INC.

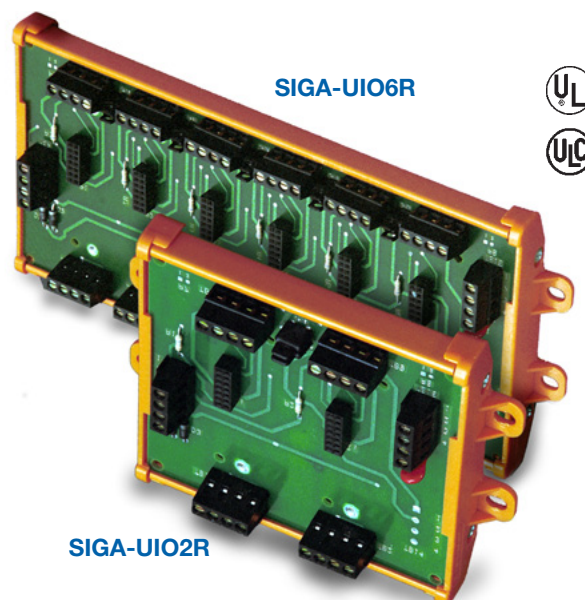
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Universal Input/ Output Module Motherboards

SIGA-UIO2R, SIGA-UIO6R, 



Overview

Signature Series Universal Input-Output Module Motherboards provide mounting and wiring terminations for up to six Signature Series plug-in UIO (SIGA-“M” series) modules. UIO motherboards slide into a rigid extruded track (included) with mounting pads for convenient mounting into a variety of equipment enclosures. UIO modules plug into the board and are held securely in place with captive machine screws. All field wiring connects to terminal blocks on the motherboard, which permits rapid removal and replacement of modules for troubleshooting.

The **SIGA-UIO2R** provides mounting and wiring terminations for up to two UIO modules, and the **SIGA-UIO6R** provides mounting and wiring terminations for up to six UIO modules. Both motherboards feature a riser #1 input and a riser #2 input bus. Jumpers on riser #1 input, between modules, facilitate sharing a single riser among more than one module. This significantly reduces wiring requirements. Removing the jumpers provide separate riser inputs to each adjacent module. Riser #2 input is fixed to each module position and cannot be split.

The **SIGA-UIO6** provides mounting and wiring terminations for up to six UIO modules. This motherboard provides two riser inputs that are common to all modules.

Standard Features

- **Modular flexibility**
Wide assortment of multi-function plug-in modules provides total flexibility.
- **Minimum wiring requirements**
Integral jumpers between modules allow sharing of risers to reduce installation wiring.
- **Easy installation**
#12 AWG (2.5 mm2) terminal blocks and sturdy mounting pads ensure quick installation into Edwards enclosures.
- **Supports automatic device mapping**
All compatible UIO modules transmit information to the loop controller regarding their circuit locations with respect to other Signature devices on the wire loop.
- **Supports intelligent devices**
On-board modules make decisions and input an alarm from initiating devices connected to them even if the loop controller's polling interrogation stops.
- **Twisted or shielded wire not required**
Because all decisions are made at the on-board modules, lower communication speeds are possible. This results in substantially improved control panel response time and less sensitivity to line noise and loop wiring properties.
- **Supports electronic addressing**
Programmable addresses are downloaded to compatible UIO modules from the loop controller, a PC, or the SIGA-PRO Signature Program/Service Tool. There are no switches or dials to set.

Mounting and Installation

Mount the UIO motherboard inside a Edwards MFC-A cabinet or other suitable electrical enclosure with screws and washers provided. Each MFC-A will hold one UIO2R motherboard or one UIO6 or UIO6R motherboard complete with their full complement of modules.

Plug a Signature Series UIO module into any available position on the motherboard and secure the module to the motherboard with the captive screws. Wiring connections are made to the terminals on the motherboard (see wiring diagram). UIO motherboard terminals are suited for #12 to #18 AWG (2.5 mm² to 0.75 mm²) wire size.

Edwards recommends that all boards and modules be installed according to latest recognized edition of national and local fire alarm codes.

Testing & Maintenance

The module's automatic self-diagnosis identifies when it is defective and causes a trouble message. The user-friendly maintenance program shows the current state of each module and other pertinent messages. Single modules may be turned off (de-activated) temporarily, from the control panel.

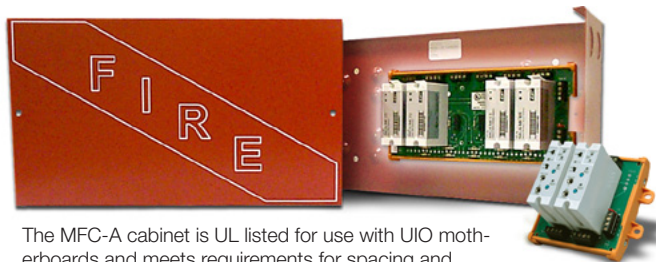
Scheduled maintenance (Regular or Selected) for proper system operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

Compatibility

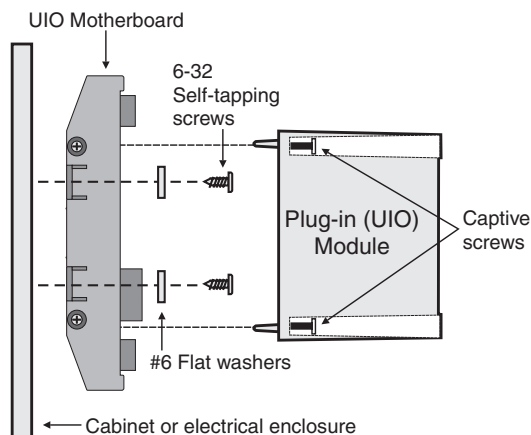
Signature Series Universal Input/Output Module Boards are compatible only with SIGA-“M” Series I/O Modules, which require a Signature Data Controller.

Warnings & Cautions

Signature devices will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

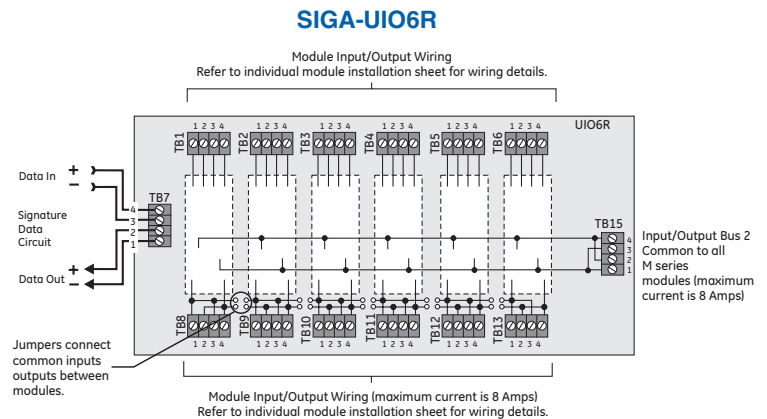
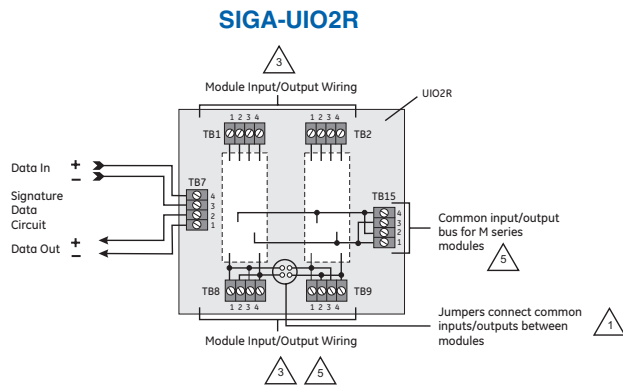


The MFC-A cabinet is UL listed for use with UIO motherboards and meets requirements for spacing and clearance around the components.



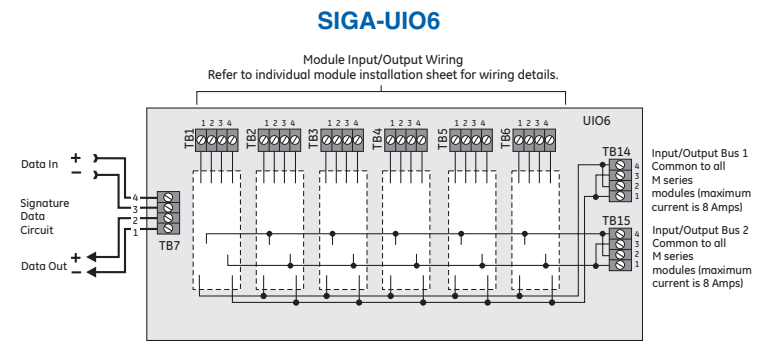
Typical Wiring

Signature Series Universal Input/Output Motherboards have terminal blocks to accept #18 AWG (0.75mm²), #16 AWG (1.0mm²), #14 AWG (1.5mm²), and #12 AWG (2.5mm²) wire sizes. See Signature Data Controller catalog sheets for detailed wiring requirements and specifications.



Notes

- 1) Jumpers may be used to make the inputs/outputs between modules common.
- 2) Not all modules use the SIGA-UIO2R terminals for the same functions.
- 3) Refer to individual SIGA-M series installation sheets for jumper settings and wiring information. Installations with multiple SIGA-UIO motherboards or enclosures (which include other wiring) require FPL, FPLR, FPLP, or equivalent NEC-approved wire for all power limited wiring. Observe the details of supervision and power limited versus non-power limited circuits. Refer to the SIGA-M series installation sheets.
- 4) Do not mix incompatible signals.
- 5) Maximum current is 8 Amps.
- 7) Refer to Signature Data Controller Installation Sheets for wiring specifications.





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Specifications

Catalog Number	SIGA-UIO2R	SIGA-UIO6R	SIGA-UIO6
Module Capacity	Two	Six	Six
Dimensions (with module installed)	5.4 inch L (across mounting feet) x 4.3 inch W x 3.2 inch H	9.56 inch L (across mounting feet) x 4.3 inch W x 3.2 inch H	
Address Requirements	no address required		
Type Code	none		
Compatible Modules	All SIGA-Mxxx Signature Series		
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)		
Mounting (cabinets)	Directly into suitable enclosures (e.g.: MFC-A) - Notes 1, 2, 3.		
Wiring Terminals	#12 AWG (2.5mm ²) to #18 AWG (0.75mm ²)		
Storage and Operating Environment	Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Operating and Storage Humidity: 0 to 93% RH		
Agency Listing	UL, ULC, MEA, CSFM		

Notes:

1. Allow a minimum clearance of one inch around all sides of the UIO motherboard.
2. On-site drilling of mounting holes may be required. Self-tapping mounting screws are provided.
3. Suitable cabinets: MFC-A, 2-WB, 2-WB3, 2-WB7, CAB2, 3-CAB5, 3-CAB7, 3-CAB14, 3-CAB21, 3-RCC series, RACC series.

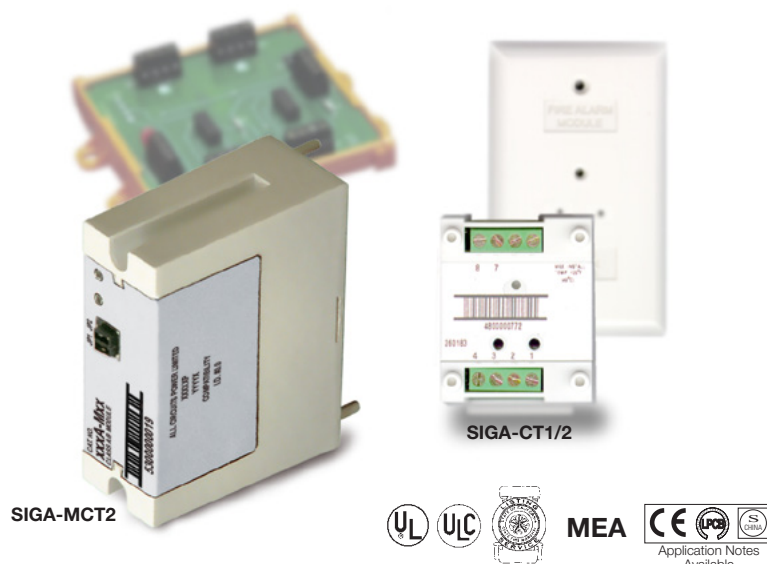
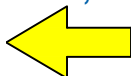
Ordering Information

Catalog Number	Description	Ship Wt. - lb (kg)
SIGA-UIO2R	Universal Input-Output Module Board w/Riser Inputs - Two Module Positions	0.32 (0.15)
SIGA-UIO6R	Universal Input-Output Module Board w/Riser Inputs - Six Module Positions	0.62 (0.28)
SIGA-UIO6	Universal Input-Output Module Board - Six Module Positions	0.56 (0.25)
MFC-A	UL listed cabinet for mounting UIO motherboards, red with white "FIRE" 8 inch H X 14 inch W X 3.5 inch D (203 mmH X 356 mm W X 89 mm D)	7.0 (3.1)



Input Modules

SIGA-CT1, SIGA-CT2 & SIGA-MCT2



Overview

The SIGA-CT1 Single Input Module and SIGA-CT2/SIGA-MCT2 Dual Input Modules are intelligent analog addressable devices used to connect one or two Class B normally-open Alarm, Supervisory, or Monitor type dry contact Initiating Device Circuits (IDC).

The actual function of these modules is determined by the “personality code” selected by the installer. This code is downloaded to the module from the Signature loop controller during system configuration.

The input modules gather analog information from the initiating devices connected to them and convert it into digital signals. The module’s on-board microprocessor analyzes the signal and decides whether or not to input an alarm.

The SIGA-CT1 and SIGA-CT2 mount to standard North American 1-gang electrical boxes, making them ideal for locations where only one module is required. Separate I/O and data loop connections are made to each module.

The SIGA-MCT2 is part of the UIO family of plug-in Signature Series modules. It functions identically to the SIGA-CT2, but takes advantage of the modular flexibility and easy installation that characterizes all UIO modules. Two- and six-module UIO motherboards are available. All wiring connections are made to terminal blocks on the motherboard. UIO assemblies may be mounted in Edwards enclosures.

Standard Features

- **Multiple applications**
Including Alarm, Alarm with delayed latching (retard) for water-flow applications, Supervisory, and Monitor. The installer selects one of four “personality codes” to be downloaded to the module through the loop controller.
- **SIGA-CT1 rated for high temperature environments**
Suitable for attic installation and monitoring high temperature heat detectors.
- **Plug-in (UIO) or standard 1-gang mount**
UIO versions allow quick installation where multiple modules are required. The 1-gang mount version is ideal for remote locations that require a single module.
- **Automatic device mapping**
Signature modules transmit information to the loop controller regarding their circuit locations with respect to other Signature devices on the wire loop.
- **Electronic addressing**
Programmable addresses are downloaded from the loop controller, a PC, or the SIGA-PRO Signature Program/Service Tool. There are no switches or dials to set.
- **Stand-alone operation**
The module makes decisions and inputs an alarm from initiating devices connected to it even if the loop controller’s polling interrogation stops. (Function availability dependent upon control panel.)
- **Ground fault detection by address**
Detects ground faults right down to the device level.

Signature Series Overview

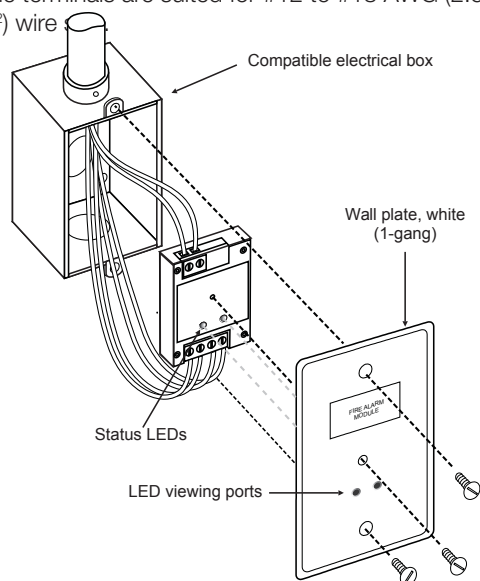
The Signature Series intelligent analog-addressable system from Edwards Security is an entire family of multi-sensor detectors and mounting bases, multiple-function input and output modules, network and non-network control panels, and user-friendly maintenance and service tools. Analog information from equipment connected to Signature devices is gathered and converted into digital signals. An onboard microprocessor in each Signature device measures and analyzes the signal and decides whether or not to input an alarm. The microprocessor in each Signature device provides four additional benefits – Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.

Self-diagnostics and History Log – Each Signature Series device constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in its non-volatile memory. This information is accessible for review any time at the control panel, PC, or using the SIGA-PRO Signature Program/Service Tool.

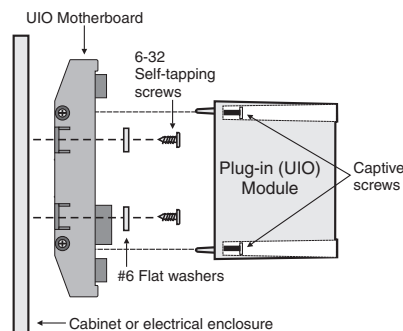
Automatic Device Mapping – The Signature Data Controller (SDC) learns where each device's serial number address is installed relative to other devices on the circuit. The SDC keeps a map of all Signature Series devices connected to it. The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing branch wiring (T-taps), device types and their address are stored on disk for printing hard copy.

Installation

SIGA-CT1 and SIGA-CT2: modules mount to North American 2½ inch (64 mm) deep 1-gang boxes and 1½ inch (38 mm) deep 4 inch square boxes with 1-gang covers and SIGA-MP mounting plates. The terminals are suited for #12 to #18 AWG (2.5 mm² to 0.75 mm²) wire.



SIGA-MCT2: mount the UIO motherboard inside a suitable Edwards enclosure with screws and washers provided. Plug the SIGA-MCT2 into any available position on the motherboard and secure the module to the motherboard with the captive screws. Wiring connections are made to the terminals on the motherboard (see wiring diagram). UIO motherboard terminals are suited for #12 to #18 AWG (2.5 mm² to 0.75 mm²) wire size.



Electronic Addressing – The loop controller electronically addresses each module, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each module has its own unique serial number stored in its on-board memory. The loop controller identifies each device on the loop and assigns a "soft" address to each serial number. If desired, the modules can be addressed using the SIGA-PRO Signature Program/Service Tool.

Edwards recommends that this module be installed according to latest recognized edition of national and local fire alarm codes.

Application

The duty performed by the SIGA-CT1 and SIGA-CT2/MCT2 is determined by their sub-type code or "Personality Code". The code is selected by the installer depending upon the desired application and is downloaded from the loop controller.

One personality code can be assigned to the SIGA-CT1. Two personality codes can be assigned to the SIGA-CT2/MCT2. Codes 1, 2, 3 and 4 can be mixed on SIGA-CT2/MCT2 modules only. For example, personality code 1 can be assigned to the first address (circuit A) and code 4 can be assigned to the second address (circuit B).

NORMALLY-OPEN ALARM - LATCHING (Personality Code 1)

- Assign to one or both circuits. Configures either circuit A or B or both for Class B normally open dry contact initiating devices such as Pull Stations, Heat Detectors, etc. An ALARM signal is sent to the loop controller when the input contact is closed. The alarm condition is latched at the module.

NORMALLY-OPEN ALARM - DELAYED LATCHING (Personality Code 2)

- Assign to one or both circuits. Configures either circuit A or B or both for Class B normally-open dry contact initiating devices such as Waterflow Alarm Switches. An ALARM signal is sent to the loop controller when the input contact is closed for approximately 16 seconds. The alarm condition is latched at the module.

NORMALLY-OPEN ACTIVE - NON-LATCHING (Personality Code 3)

- Assign to one or both circuits. Configures either circuit A or B or both for Class B normally-open dry contact monitoring input such as from Fans, Dampers, Doors, etc. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is not latched at the module.

NORMALLY-OPEN ACTIVE - LATCHING (Personality Code 4)

- Assign to one or both circuits. Configures either circuit A or B or both for Class B normally open dry contact monitoring input such as from Supervisory and Tamper Switches. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is latched at the module.

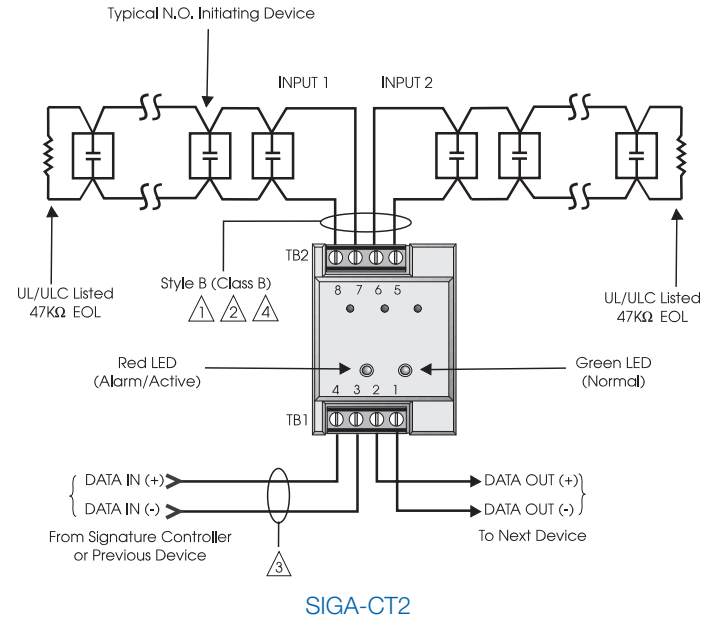
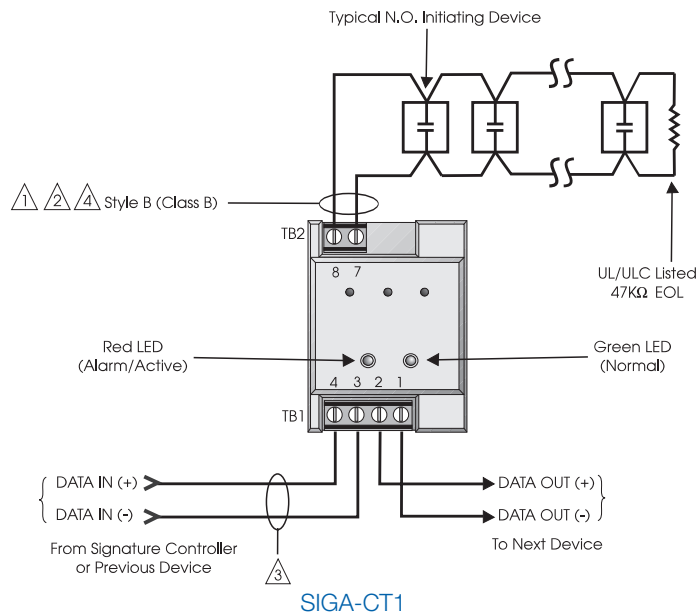
Typical Wiring

Modules will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14AWG (1.50mm²), and #12 AWG (2.50mm²) wire sizes.

Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

Initiating (Slave) Device Circuit Wire Specifications

Maximum Allowable Wire Resistance	50 ohms (25 ohms per wire) per Circuit	
Maximum Allowable Wire Capacitance	0.1µF per Circuit	
For Design Reference:	Wire Size	Maximum Distance to EOLR
	#18 AWG (0.75 mm ²)	4,000 ft (1,219 m)
	#16 AWG (1.00 mm ²)	
	#14 AWG (1.50 mm ²)	
	#12 AWG (1.50 mm ²)	



NOTES

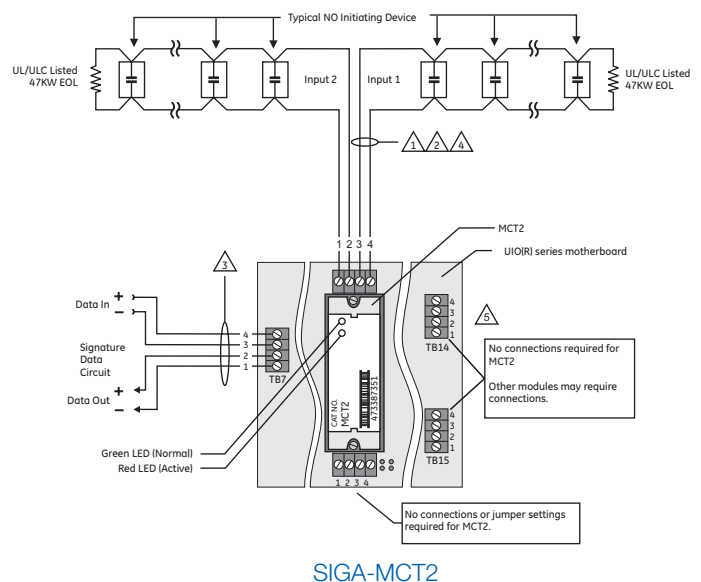
- 1 Maximum 25 Ohm resistance per wire.
- 2 Maximum #12 AWG (2.5 mm²) wire; Minimum #18 AWG (0.75 mm²).
- 3 Refer to Signature controller installation sheet for wiring specifications.
- 4 Maximum 10 Vdc @ 350 µA
- 5 The SIGA-UIO6R and the SIGA-UIO2R do not come with TB14.
- 6 All wiring is supervised and power-limited.
- 7 These modules will not support 2-wire smoke detectors.

Warnings & Cautions

This module will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your local fire protection specialist.

Compatibility

The Signature Series modules are compatible only with EST's Signature Loop Controller.





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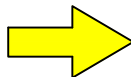
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Specifications

Catalog Number	SIGA-CT1	SIGA-CT2	SIGA-MCT2
Description	Single Input Module	Dual Input Module	
Type Code	48 (factory set) Four sub-types (personality codes) are available	49 (factory set) Four sub-types (personality codes) are available	
Address Requirements	Uses One Module Address	Uses Two Module Addresses	
Operating Current	Standby = 250µA; Activated = 400µA	Standby = 396µA; Activated = 680µA	
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)		
Construction	High Impact Engineering Polymer		
Mounting	North American 2½ inch (64 mm) deep one-gang boxes and 1½ inch (38 mm) deep 4 inch square boxes with one-gang covers and SIGA-MP mounting plates		UIO2R/6R/6 Mother-board
Storage and Operating Environment	Operating Temperature: 32°F to 158°F (0°C to 70°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C); Humidity: 0 to 93% RH	Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH	
LED Operation	On-board Green LED - Flashes when polled; On-board Red LED - Flashes when in alarm/active Both LEDs - Glow steady when in alarm (stand-alone)		
Compatibility	Use with Signature Loop Controller		
Agency Listings	UL, ULC, MEA, CSFM		

Ordering Information

Catalog Number	Description	Ship Wt. lbs (kg)
SIGA-CT1	Single Input Module — UL/ULC Listed	0.4 (0.15)
SIGA-CT2	Dual Input Module — UL/ULC Listed	0.4 (0.15)
SIGA-MCT2	Dual Input Plug-in (UIO) Module — UL, ULC Listed	0.1 (0.05)

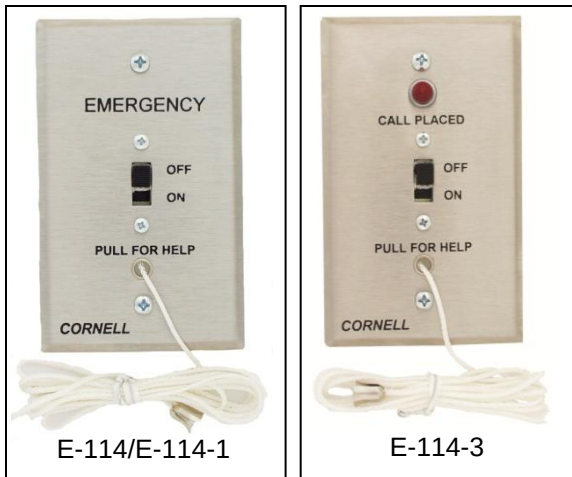
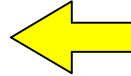


Related Equipment		
27193-11	Surface Mount Box - Red, 1-gang	1.0 (0.6)
27193-16	Surface Mount Box - White, 1-gang	1.0 (0.6)
SIGA-UIO2R	Universal Input-Output Module Board w/Riser Inputs — Two Module Positions	0.32 (0.15)
SIGA-UIO6R	Universal Input-Output Module Board w/Riser Inputs — Six Module Positions	0.62 (0.28)
SIGA-UIO6	Universal Input-Output Module Board — Six Module Positions	0.56 (0.25)
MFC-A	Multifunction Fire Cabinet — Red, supports Signature Module Mounting Plates	7.0 (3.1)
SIGA-MB4	Transponder Mounting Bracket (allows for mounting two 1-gang modules in a 2-gang box)	0.4 (0.15)
SIGA-MP1	Signature Module Mounting Plate, 1 footprint	1.5 (0.70)
SIGA-MP2	Signature Module Mounting Plate, 1/2 footprint	0.5 (0.23)
SIGA-MP2L	Signature Module Mounting Plate, 1/2 extended footprint	1.02 (0.46)



Emergency Stations – Pull String with auxiliary contact and LED options

E-114, E-114-1, and E-114-3



Description: E-114, E-114-1 and E-114-3 Emergency Stations feature satin finished stainless steel faceplates with silk-screened designations. They may be flush mounted on standard outlet boxes with single-gang rings, or surface mounted on Wiremold 5748 or equal with a depth requirement of 1 3/4". Field wiring terminations are wire leads.

The E-114, E-114-1 and E-114-3 have DPDT contacts and pigtail wires. The E-114 has four; the E-114-1 has seven and the E-114-3 has eight pigtail wires.

Operation: Pulling the six-foot nylon cord on CORNELL's Emergency Station activates a call for help. The E-114-3 also has a LED light to confirm call placement. To cancel the call, slide the switch to the off position.

Mounting: The satin finish stainless steel faceplate with silk-screened designations may be flush mounted on a standard outlet box with single-gang plaster ring, or surface mounted on a Wiremold 5748 or equivalent.

Engineering Specifications: The contractor shall furnish and install these CORNELL Emergency Stations as indicated on the plans. Faceplates shall be satin-finish stainless steel with silk-screened designations. Calls in progress can be cancelled by moving the switch to off position. (A red LED on the E-114-3 indicates calls in progress). Stations shall be mounted on standard outlet boxes with single-gang rings or Wiremold 5748 or equivalent.

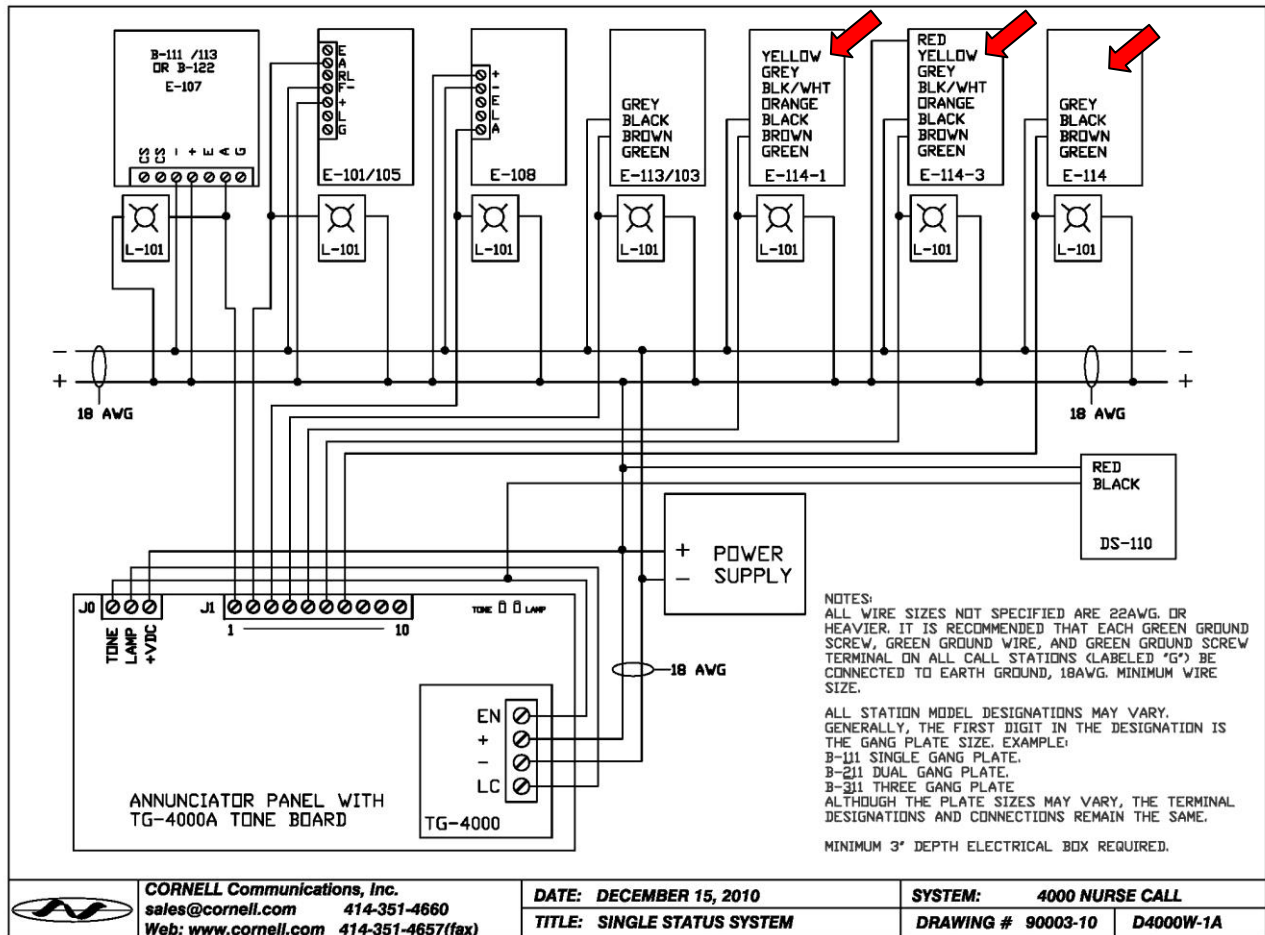
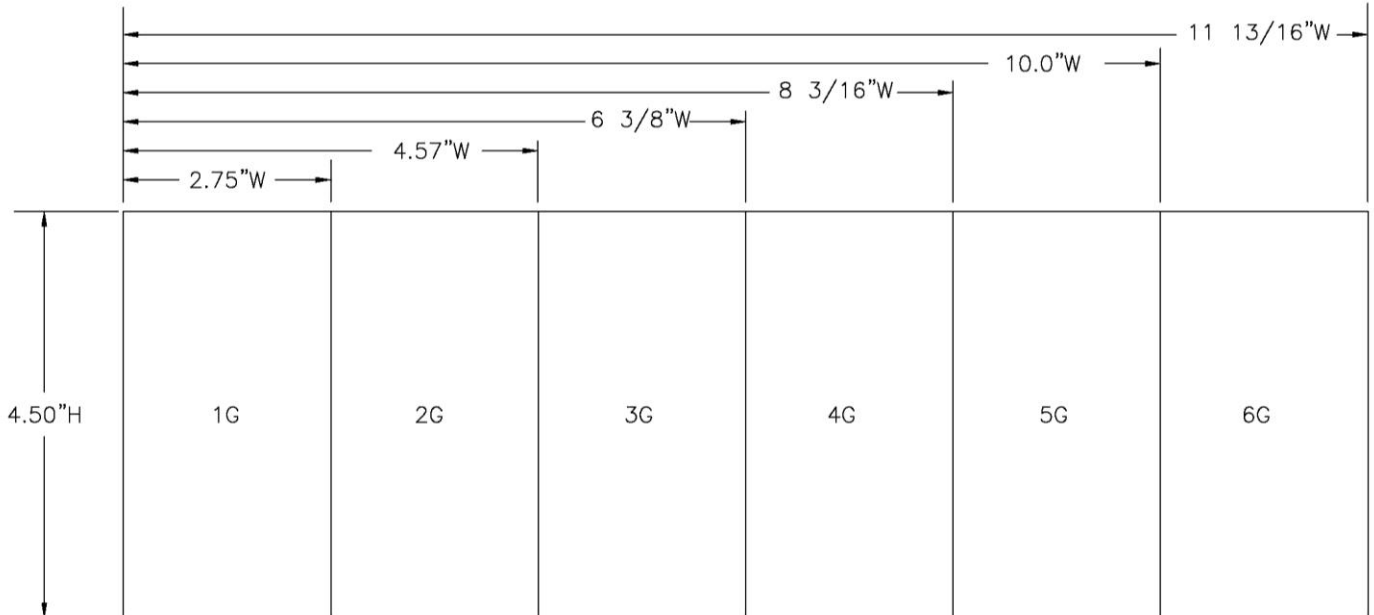
Technical Information:

- Power Requirements: 24VDC
- Operating Environment: 50-120°F Indoor Non-condensing
- Physical Faceplate Dimensions: 4 1/2 "H x 2 3/4 "W (Standard 1 Gang)
- Mounting: Single-Gang back box with 1 3/4" minimum depth
- Wiring: Field wiring terminations are wire leads.

Available in 1-6 gang sizes:

*stations are only UL Listed in the 1 gang size

*For correct part number, change first number (1) to gang size needed



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DATE: DECEMBER 15, 2010
TITLE: SINGLE STATUS SYSTEM

SYSTEM: 4000 NURSE CALL
DRAWING # 90003-10 D4000W-1A

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